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# BMJ Paediatrics Open

## Needs assessment of self-management skills towards health care transition and patient portal use among adolescent and young adult patients

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Keywords:	Adolescent Health, Qualitative research

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## Needs assessment of self-management skills towards health care transition and patient portal use among adolescent and young adult patients

Sophie Allende-Richter, MD<sup>a,b</sup>, Melanie Ramirez<sup>a,c</sup>, Zana Khoury, MS<sup>a</sup>, Fabienne Bourgeois, MD<sup>a,b</sup>, Alexandra Epee-Bounya, MD<sup>a,b</sup>, Kitty O'Hare, MD<sup>d,e</sup>

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### Abbreviations:

AAP: American Academy of Pediatrics

AAFP: American Academy of Family Physicians

ACP: American College of Physicians

HCT: Health Care Transition

AYA: Adolescent and Young Adult,

PHI: Personal Health Information

**DoeAbstract**

We conducted a 15-item self-answered survey to assess self-management skills and explore interest in a patient portal among patients ages 12-25. Out of 61 participants, 33% did not know how to schedule an appointment, 50% did not know how to refill prescriptions, and 58% did not know how to access personal health information. 84% were not aware of the portal and 92% had never used it. Referring to the portal as an online application increased participants interest by 39%. These results indicate that promoting patient portal access can help youths gain self-management skills towards transition.

**Key Words:** self-management, patient portal, health care transition, adolescent and young adults

**Key Messages:**A. What's known about this subject:

Although there are now established Health Care Transition best practices, there remains a need to promote adolescent and young adults active engagement in this process.

B. What does this study add:

This study highlights an opportunity to leverage patient portal applications to bolster self-management skills towards transition readiness among a generation of tech savvy youths.

84% of US youths, with and without special healthcare needs, do not receive comprehensive Health Care Transition (HCT) preparation.[i] Failure to properly transfer adolescent and young adult (AYA) patients to adult care is associated with increased demand on pediatric providers untrained in adult medicine, lapses in healthcare access,[ii] preventable emergency department visits and hospital admissions.[iii] The 2018 clinical report on HCT published by the AAP, AAFP, and ACP, recommends developing systems that promote early and continued engagement of AYA to support HCT preparation.[iv] With the ability to manage appointments, message providers, and access personal health information (PHI), patient portals have been associated with better medication management among youths with chronic illness.[v]

Our objective was to explore whether the use of a patient portal can promote AYA patient's self-management skills towards transition readiness.

We conducted a needs assessment at an urban academic pediatric practice from September to November 2018. We designed a 15-item survey to evaluate: (1) self-management skills using six questions adapted from a validated screening tool, the *Transition Readiness Assessment Questionnaire*,[vi] (2) current use and awareness of a patient portal, and (3) preferred methods for accessing healthcare. The survey was available in English and Spanish. We recruited 61 participants ages 12 to 25.

With 100 % participation, the mean age of our participants was 16.77 years, 56% self-identified as female and 44% male, the majority were Hispanic (93%) most spoke English fluently (98%). Our results showed that 33% of participants did not know how to schedule medical appointment, 50% did not know how to refill prescriptions, and 57% did not know how to access PHI, 48% were unaware of our transition policy, 84% were unaware of our patient portal, 10% knew how to access it but only 8% had used it (Table1).

Table 1. Adolescent Self-Management Skills Assessment and Portal Awareness							
N=61							
35 Female: 26 Male							
Age (years): 12-14 (28%); 15-17 (36%); 18-25 (36%)		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Unanswered
<b>Adolescent Awareness of Healthcare Access</b>							
I know how to schedule and cancel an appointment with my provider		26 (43%)	15 (25%)	9 (15%)	9 (15%)	2 (3%)	0 (0%)
I know how to refill my own prescriptions		15 (25%)	16 (26%)	7 (11%)	21 (34%)	2 (3%)	0 (0%)
I know how to access personal health information (example: lab/test results, physical exam forms, etc.)		14 (23%)	12 (20%)	12 (20%)	20 (33%)	3 (5%)	0 (0%)
<b>General Adolescent Healthcare Awareness</b>							
I understand how my health insurance might change at age 19		13 (21%)	21 (34%)	10 (16%)	16 (26%)	1 (2%)	0 (0%)
I understand my rights to confidential health services as an adolescent		21 (34%)	23 (38%)	6 (10%)	11 (18%)	0 (0%)	0 (0%)
I understand the transition policy at Martha Eliot		12 (20%)	20 (33%)	9 (15%)	19 (31%)	1 (2%)	0 (0%)
<b>Adolescent Experience with MyChildren's Patient Portal</b>							
Were you aware the MyChildren's patient portal has an app and website that allows you to send direct messages to your doctor's office?			Yes	No	Unanswered		
			10 (16%)	51 (84%)	0 (0%)		
Do you know how to access the MyChildren's patient portal?			6 (10%)	55 (90%)	0 (0%)		
Have you ever used the MyChildren's patient portal?			5 (8%)	55 (90%)	1 (2%)		

The first 21 respondents demonstrated little interest in patient portal applications. Thus, we modified the survey referring to the portal as an online tool. This resulted in a 39% increase in reported preference for the portal. Out of 40 additional respondents, 68% were interested in self-scheduling and 80% express interest in accessing PHI through the portal (Table 2).

Table 2. Adolescent Preferences

35 Female: 26 Male			I would prefer to schedule my appointments:	I would prefer to refill my prescriptions:	I would prefer to access personal health information:
Age (years): 12-14 (28%); 15-17 (36%); 18-25 (36%)					
Online (MyChildren's Patient Portal Website or App)**	Strongly Agree	15 (38%)	10 (25%)	14 (35%)	
	Agree	12 (30%)	15 (38%)	18 (45%)	
	Neither Agree nor Disagree	6 (15%)	7 (18%)	1 (3%)	
	Disagree	4 (10%)	5 (13%)	4 (10%)	
	Strongly Disagree	2 (5%)	2 (5%)	2 (5%)	
N=40	Unanswered	1 (3%)	1 (3%)	1 (3%)	
	Strongly Agree	2 (10%)	1 (5%)	4 (19%)	
	Agree	6 (29%)	2 (10%)	4 (19%)	
	Neither Agree nor Disagree	7 (33%)	9 (43%)	7 (33%)	
	Disagree	5 (24%)	4 (19%)	4 (19%)	
Via MyChildren's Patient Portal App*	Strongly Disagree	1 (5%)	5 (24%)	2 (10%)	
	Unanswered	0 (0%)	0 (0%)	0 (0%)	
	Strongly Agree	2 (10%)	1 (5%)	6 (29%)	
	Agree	4 (19%)	1 (5%)	2 (10%)	
	Unanswered	0 (0%)	0 (0%)	0 (0%)	
Via MyChildren's Patient Portal Website*	Strongly Agree	2 (10%)	1 (5%)	6 (29%)	
	Agree	4 (19%)	1 (5%)	2 (10%)	



1	N=21	Neither Agree nor Disagree	10 (48%)	10 (48%)	8 (38%)
2		Disagree	3 (14%)	4 (19%)	3 (14%)
3		Strongly Disagree	2 (10%)	5 (24%)	2 (10%)
4		Unanswered	0 (0%)	0 (0%)	0 (0%)
5		Strongly Agree	23 (38%)	14 (23%)	14 (23%)
6	Via Phone Call	Agree	29 (48%)	28 (46%)	25 (41%)
7	N=61	Neither Agree nor Disagree	8 (13%)	9 (15%)	12 (20%)
8		Disagree	1 (2%)	8 (13%)	8 (13%)
9		Strongly Disagree	0 (0%)	2 (3%)	1 (2%)
10		Unanswered	0 (0%)	0 (0%)	1 (2%)
11		Strongly Agree	11 (18%)	20 (33%)	25 (41%)
12	In Person	Agree	21 (34%)	19 (31%)	27 (44%)
13	N=61	Neither Agree nor Disagree	18 (30%)	12 (20%)	4 (7%)
14		Disagree	7 (11%)	6 (10%)	3 (5%)
15		Strongly Disagree	2 (3%)	2 (3%)	1 (2%)
16		Unanswered	2 (3%)	2 (3%)	1 (2%)

\*Based on 21 surveys using the phrasing "MyChildren's Patient Portal Website" and "MyChildren's Patient Portal App"

\*\*Based on 40 surveys using the phrasing "Online (including MyChildren's Patient Portal Website or App)"

Our findings indicate that while AYA patients exhibit low self-management skills and awareness of a patient portal, most welcome using it to manage their health. Further research is needed to validate whether a patient portal can promote self-management skills towards transition readiness.

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**Conflict of Interest:** The Authors have no conflicts of interest relevant to this article to disclose.

**Ethic:** Please note this study was exempt as a quality improvement initiative by our Institutional Board of Review

**Authors Statement:** Dr. Sophie Allende-Richter conceptualized the study, critically reviewed and revised the manuscript for important intellectual content. Melanie Ramirez provided significant contributions to the data collection that led to this manuscript. She also drafted the initial manuscript, reviewed and revised it. Zana Khoury provided significant contributions to the data analysis and presentation used in this manuscript. She also critically reviewed and revised the manuscript. Dr. Fabienne Bourgeois provided substantial contribution to the manuscript conception and critically reviewed and revised it. Dr. Alexandra Epee-Bounya provided substantial contribution to the manuscript conception and critically reviewed and revised it. Dr. Kitty O'Hare provided substantial contribution to the manuscript conception and critically reviewed and revised it.

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**DoeAbstract**

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2 We conducted a 15-item self-answered survey to assess self-management skills and explore interest in a patient portal among patients ages 12-25.

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5 Out of 61 participants, 33% did not know how to schedule an appointment, 50% did not know how to refill prescriptions, and 58% did not know how

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9 increased participants interest by 39%. These results indicate that promoting patient portal access can help youths gain self-management skills

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11 towards transition.

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**Key Words:** self-management, patient portal, health care transition, adolescent and young adults

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84% of US youths, with and without special healthcare needs, do not receive comprehensive Health Care Transition (HCT) preparation.[i] Failure to properly transfer adolescent and young adult (AYA) patients to adult care is associated with increased demand on pediatric providers untrained in adult medicine, lapses in healthcare access,[ii] preventable emergency department visits and hospital admissions.[iii] The 2018 clinical report on HCT published by the AAP, AAFP, and ACP, recommends developing systems that promote early and continued engagement of AYA to support HCT preparation.[iv] With the ability to manage appointments, message providers, and access personal health information (PHI), patient portals have been associated with better medication management among youths with chronic illness.[v]

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With 100 % participation, the mean age of our participants was 16.77 years, 56% self-identified as female and 44% male, the majority were Hispanic (93%) most spoke English fluently (98%). Our results showed that 33% of participants did not know how to schedule medical appointment, 50% did not know how to refill prescriptions, and 57% did not know how to access PHI, 48% were unaware of our transition policy, 84% were unaware of our patient portal, 10% knew how to access it but only 8% had used it (Table1).



Table 1. Adolescent Self-Management Skills Assessment and Portal Awareness

N=61		Strongly Agree		Neither Agree nor Disagree		Strongly Disagree		Unanswered	
35 Female: 26 Male									
Age (years): 12-14 (28%); 15-17 (36%); 18-25 (36%)									
<b>Adolescent Awareness of Healthcare Access</b>									
I know how to schedule and cancel an appointment with my provider		26 (43%)	15 (25%)	9 (15%)	9 (15%)	2 (3%)	0 (0%)		
I know how to refill my own prescriptions		15 (25%)	16 (26%)	7 (11%)	21 (34%)	2 (3%)	0 (0%)		
I know how to access personal health information (example: lab/test results, physical exam forms, etc.)		14 (23%)	12 (20%)	12 (20%)	20 (33%)	3 (5%)	0 (0%)		
<b>General Adolescent Healthcare Awareness</b>									
I understand how my health insurance might change at age 19		13 (21%)	21 (34%)	10 (16%)	16 (26%)	1 (2%)	0 (0%)		
I understand my rights to confidential health services as an adolescent		21 (34%)	23 (38%)	6 (10%)	11 (18%)	0 (0%)	0 (0%)		
I understand the transition policy at Martha Eliot		12 (20%)	20 (33%)	9 (15%)	19 (31%)	1 (2%)	0 (0%)		
<b>Adolescent Experience with MyChildren's Patient Portal</b>									
Were you aware the MyChildren's patient portal has an app and website that allows you to send direct messages to your doctor's office?			Yes	No					
			10 (16%)	51 (84%)			0 (0%)		
Do you know how to access the MyChildren's patient portal?			6 (10%)	55 (90%)			0 (0%)		
Have you ever used the MyChildren's patient portal?			5 (8%)	55 (90%)			1 (2%)		

The first 21 respondents demonstrated little interest in patient portal applications. Thus, we modified the survey referring to the portal as an online tool. This resulted in a 39% increase in reported preference for the portal. Out of 40 additional respondents, 68% were interested in self-scheduling and 80% express interest in accessing PHI through the portal (Table 2).

Table 2. Adolescent Preferences

35 Female: 26 Male		I would prefer to schedule my appointments:	I would prefer to refill my prescriptions:	I would prefer to access personal health information:
Age (years): 12-14 (28%); 15-17 (36%); 18-25 (36%)				
Online (MyChildren's Patient Portal Website or App)**	Strongly Agree	15 (38%)	10 (25%)	14 (35%)
	Agree	12 (30%)	15 (38%)	18 (45%)
	Neither Agree nor Disagree	6 (15%)	7 (18%)	1 (3%)
	Disagree	4 (10%)	5 (13%)	4 (10%)
	Strongly Disagree	2 (5%)	2 (5%)	2 (5%)
N=40	Unanswered	1 (3%)	1 (3%)	1 (3%)
	Strongly Agree	2 (10%)	1 (5%)	4 (19%)
	Agree	6 (29%)	2 (10%)	4 (19%)
	Neither Agree nor Disagree	7 (33%)	9 (43%)	7 (33%)
	Disagree	5 (24%)	4 (19%)	4 (19%)
Via MyChildren's Patient Portal App*	Strongly Disagree	1 (5%)	5 (24%)	2 (10%)
	Unanswered	0 (0%)	0 (0%)	0 (0%)
	Strongly Agree	2 (10%)	1 (5%)	6 (29%)
	Agree	4 (19%)	1 (5%)	2 (10%)
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Via MyChildren's Patient Portal Website*	Strongly Agree	2 (10%)	1 (5%)	6 (29%)
	Agree	4 (19%)	1 (5%)	2 (10%)

1	N=21	Neither Agree nor Disagree	10 (48%)	10 (48%)	8 (38%)
2		Disagree	3 (14%)	4 (19%)	3 (14%)
3					
4		Strongly Disagree	2 (10%)	5 (24%)	2 (10%)
5					
6		Unanswered	0 (0%)	0 (0%)	0 (0%)
7					
8	Via Phone Call	Strongly Agree	23 (38%)	14 (23%)	14 (23%)
9					
10	N=61	Agree	29 (48%)	28 (46%)	25 (41%)
11		Neither Agree nor Disagree	8 (13%)	9 (15%)	12 (20%)
12					
13		Disagree	1 (2%)	8 (13%)	8 (13%)
14					
15		Strongly Disagree	0 (0%)	2 (3%)	1 (2%)
16					
17		Unanswered	0 (0%)	0 (0%)	1 (2%)
18					
19	In Person	Strongly Agree	11 (18%)	20 (33%)	25 (41%)
20					
21	N=61	Agree	21 (34%)	19 (31%)	27 (44%)
22		Neither Agree nor Disagree	18 (30%)	12 (20%)	4 (7%)
23					
24		Disagree	7 (11%)	6 (10%)	3 (5%)
25					
26		Strongly Disagree	2 (3%)	2 (3%)	1 (2%)
27					
28		Unanswered	2 (3%)	2 (3%)	1 (2%)
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\*Based on 21 surveys using the phrasing "MyChildren's Patient Portal Website" and "MyChildren's Patient Portal App"

\*\*Based on 40 surveys using the phrasing "Online (including MyChildren's Patient Portal Website or App)"

Our findings indicate that while AYA patients exhibit low self-management skills and awareness of a patient portal, most welcome using it to manage their health. Further research is needed to validate whether a patient portal can promote self-management skills towards transition readiness.

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**Authors Statement:** Dr. Sophie Allende-Richter conceptualized the study, critically reviewed and revised the manuscript for important intellectual content. Melanie Ramirez provided significant contributions to the data collection that led to this manuscript. She also drafted the initial manuscript, reviewed and revised it. Zana Khoury provided significant contributions to the data analysis and presentation used in this manuscript. She also critically reviewed and revised the manuscript. Dr. Fabienne Bourgeois provided substantial contribution to the manuscript conception and critically reviewed and revised it. Dr. Alexandra Epee-Bounya provided substantial contribution to the manuscript conception and critically reviewed and revised it. Dr. Kitty O'Hare provided substantial contribution to the manuscript conception and critically reviewed and revised it.

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*The information you provide will only be used by our medical staff to better meet your needs.*

1. What is your age:

2. What is your gender:

- male
- female
- other (please specify):

#### Health Care Access

3. I know how to schedule or cancel an appointment with my provider:

- Strongly agree
- Disagree
- Agree
- Neither agree nor disagree
- Strongly disagree

4. I know how to refill my prescriptions:

- Strongly agree
- Disagree
- Agree
- Neither agree nor disagree
- Strongly disagree

5. I know how to access my personal health care information (example: lab/ test results, physical exam forms, etc.)

- Strongly agree
- Disagree
- Agree
- Neither agree nor disagree
- Strongly disagree

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5 General Health Care Awareness  
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7 *The following questions ask you about your general awareness of different healthcare policies and*  
8 *resources*  
9

10 6. I understand how my health insurance might change at age 19:

- 11  
12  Strongly agree  
13  
14  Disagree  
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16  Agree  
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18  Neither agree nor disagree  
19  
20  Strongly disagree  
21

22  
23 7. I understand my rights to confidential health services as an adolescent:

- 24  
25  Strongly agree  
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27  Disagree  
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29  Agree  
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31  Neither agree nor disagree  
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33  Strongly disagree  
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36 8. I understand the transition policy at Martha Eliot:

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38  Strongly agree  
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40  Disagree  
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42  Agree  
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44  Neither agree nor disagree  
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7 Communication preference

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9 *The MyChildren's patient portal is a secure website or electronic application (app) that allows*  
10 *patients to review their records, manage appointments, and send messages to their clinicians.*

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13 *including the patient portal.*

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18 direct messages to your doctor's office?

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24 10. Do you know how to access the MyChildren's patient portal?

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28  No  
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30 11. Have you ever used the MyChildren's patient portal?

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32  Yes  
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34  No  
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36 12. I would prefer to schedule appointments:

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38 Via phone call	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39 *Online (MyChildren's 40 Patient Portal Website or App)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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48 13. I would prefer to refill prescriptions:

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
49 In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50 Via phone call	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51 *Online (MyChildren's 52 Patient Portal Website or App)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. I would prefer to access personal health information:

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Via phone call	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Online (MyChildren's Patient Portal Website or App)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. How would you like to learn more about (check all that apply):

	In person	Flyer	Clinic Website	Martha Eliot Facebook	Messages from MyChildren's Patient Portal
Health insurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patient privacy Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Martha Eliot Transition Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*The first 21 respondents demonstrated little interest in patient portal applications. Thus, we clarified the phrasing "MyChildren's Patient Portal Website" and "MyChildren's Patient Portal App" to "Online (including MyChildren's Patient Portal Website or App)" for the 40 additional respondents.



# BMJ Paediatrics Open

## Assessment of: self-management skills towards transition readiness and patient portal use among Hispanic adolescent and young adult patients.

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Manuscript ID	bmjpo-2020-000658.R2
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Keywords:	Adolescent Health, Qualitative research

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**Assessment of: Self-management skills towards Transition Readiness and Patient Portal use among Hispanic Adolescents and Young Adult Patients.**

Sophie Allende-Richter, MD<sup>a,b</sup>, Melanie Ramirez<sup>a,c</sup>, Zana Khoury, MS<sup>a</sup>, Fabienne Bourgeois, MD<sup>a,b</sup>, Alexandra Epee-Bounya, MD<sup>a,b</sup>, Kitty O'Hare, MD<sup>d,e</sup>

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**Words Count:** 600

**Abbreviations:**

AAP: American Academy of Pediatrics

AAFP: American Academy of Family Physicians

ACP: American College of Physicians

HCT: Health Care Transition

AYA: Adolescent and Young Adult,

PHI: Personal Health Information

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**Abstract**

We conducted a 15-item self-answered survey to assess self-management skills and explore interest in a patient portal among publicly insured Hispanic youths ages 12-25. Out of 61 participants, 33% did not know how to schedule an appointment, 50% how to refill prescriptions, 58% how to access their personal health information, 84% were unaware of the portal and 92% never used it. Referring to the portal as an online application increased participants interest by 39%. Although study participants exhibit low self-management skills and awareness of a patient portal, most welcome using it to manage their health. Further research is needed to validate whether a patient portal can promote self-management skills towards transition readiness among Hispanic youths.

**Key Words:** self-management, patient portal, health care transition, adolescent and young adults, Hispanic youths

84% of US youths, with and without special healthcare needs, do not receive comprehensive Health Care Transition (HCT) preparation.[i] Failure to properly transfer adolescent and young adult (AYA) patients to adult care is associated with increased demand on pediatric providers untrained in adult medicine, lapses in healthcare access,[ii] preventable emergency department visits and hospital admissions.[iii] The 2018 clinical report on HCT published by the AAP, AAFP, and ACP, recommends developing systems that promote early and continued engagement of AYA to support HCT preparation.[iv] With the ability to manage appointments, message providers, access personal health information (PHI) patient portals are electronic health record applications that have been associated with better medication management among youths with chronic illness.[v]

Our objective was to explore whether the use of a patient portal can promote AYA patient's self-management skills towards transition readiness.

We conducted a cross-sectional survey among publicly insured Hispanic youths, at an academic pediatric practice located in Boston, from September to November 2018. We designed a 15-item survey (Supplemental material). to evaluate: (1) self-management skills using six questions adapted from a validated screening tool, the *Transition Readiness Assessment Questionnaire*, [vi] (2) current use and awareness of a patient portal, and (3) preferred methods for accessing healthcare. The survey was available in English and Spanish. The study was IRB exempted. Patient and public involvement statement: although there were no active patient and public involvement in this research, this study was designed with the aim to assess and improve our patients experiences. We recruited 61 participants ages 12 to 25, the mean age was 16.77 years, 56% self-identified as female and 44% as male, the majority were Hispanic (93%) and most spoke English fluently (98%). Our results showed that 33% of participants did not know how to schedule medical appointment, 50% how to refill prescriptions, and 57% how to access PHI, 48% were unaware of our transition policy, 84% of our patient portal, 10% knew how to access it but only 8% had used it (Table1) (Supplemental material).

Table 1. Adolescent Self-Management Skills Assessment and Portal Awareness

N=61		Strongly Agree		Agree		Neither Agree nor Disagree		Strongly Disagree		Unanswered	
35 Female: 26 Male											
Age (years): 12-14 (28%); 15-17 (36%); 18-25 (36%)											
<b>Adolescent Awareness of Healthcare Access</b>											
I know how to schedule and cancel an appointment with my provider		26 (43%)	15 (25%)	9 (15%)	9 (15%)	2 (3%)	0 (0%)				
I know how to refill my own prescriptions		15 (25%)	16 (26%)	7 (11%)	21 (34%)	2 (3%)	0 (0%)				
I know how to access personal health information (example: lab/test results, physical exam forms, etc.)		14 (23%)	12 (20%)	12 (20%)	20 (33%)	3 (5%)	0 (0%)				
<b>General Adolescent Healthcare Awareness</b>											
I understand how my health insurance might change at age 19		13 (21%)	21 (34%)	10 (16%)	16 (26%)	1 (2%)	0 (0%)				
I understand my rights to confidential health services as an adolescent		21 (34%)	23 (38%)	6 (10%)	11 (18%)	0 (0%)	0 (0%)				
I understand the transition policy at Martha Eliot		12 (20%)	20 (33%)	9 (15%)	19 (31%)	1 (2%)	0 (0%)				
<b>Adolescent Experience with MyChildren's Patient Portal</b>											
Were you aware the MyChildren's patient portal has an app and website that allows you to send direct messages to your doctor's office?											
		Yes		No		Unanswered					
		10 (16%)		51 (84%)		0 (0%)					
Do you know how to access the MyChildren's patient portal?											
		6 (10%)		55 (90%)		0 (0%)					
Have you ever used the MyChildren's patient portal?											
		5 (8%)		55 (90%)		1 (2%)					

The first 21 respondents demonstrated little interest in patient portal. Thus, we clarified the survey referring to the portal as an online tool. This resulted in a 39% increase in reported preference for the portal. Out of 40 additional respondents, 68% were interested in self-scheduling and 80% in accessing PHI through the portal (Table 2).

Table 2. Adolescent Preferences

35 Female: 26 Male		I would prefer to schedule my appointments:	I would prefer to refill my prescriptions:	I would prefer to access personal health information:
Age (years): 12-14 (28%); 15-17 (36%); 18-25 (36%)				
Online (MyChildren's Patient Portal Website or App)**	Strongly Agree	15 (38%)	10 (25%)	14 (35%)
	Agree	12 (30%)	15 (38%)	18 (45%)
	Neither Agree nor Disagree	6 (15%)	7 (18%)	1 (3%)
	Disagree	4 (10%)	5 (13%)	4 (10%)
	Strongly Disagree	2 (5%)	2 (5%)	2 (5%)
N=40	Unanswered	1 (3%)	1 (3%)	1 (3%)
	Strongly Agree	2 (10%)	1 (5%)	4 (19%)
	Agree	6 (29%)	2 (10%)	4 (19%)
	Neither Agree nor Disagree	7 (33%)	9 (43%)	7 (33%)
	Disagree	5 (24%)	4 (19%)	4 (19%)
Via MyChildren's Patient Portal App*	Strongly Disagree	1 (5%)	5 (24%)	2 (10%)
	Unanswered	0 (0%)	0 (0%)	0 (0%)
	Strongly Agree	2 (10%)	1 (5%)	6 (29%)
	Agree	4 (19%)	1 (5%)	2 (10%)
	Unanswered	0 (0%)	0 (0%)	0 (0%)
Via MyChildren's Patient Portal Website*	Strongly Agree	2 (10%)	1 (5%)	6 (29%)
	Agree	4 (19%)	1 (5%)	2 (10%)

1	N=21	Neither Agree nor Disagree	10 (48%)	10 (48%)	8 (38%)
2		Disagree	3 (14%)	4 (19%)	3 (14%)
3					
4		Strongly Disagree	2 (10%)	5 (24%)	2 (10%)
5					
6		Unanswered	0 (0%)	0 (0%)	0 (0%)
7					
8					
9	Via Phone Call	Strongly Agree	23 (38%)	14 (23%)	14 (23%)
10					
11	N=61	Agree	29 (48%)	28 (46%)	25 (41%)
12					
13		Neither Agree nor Disagree	8 (13%)	9 (15%)	12 (20%)
14					
15		Disagree	1 (2%)	8 (13%)	8 (13%)
16					
17		Strongly Disagree	0 (0%)	2 (3%)	1 (2%)
18					
19		Unanswered	0 (0%)	0 (0%)	1 (2%)
20					
21	In Person	Strongly Agree	11 (18%)	20 (33%)	25 (41%)
22					
23					
24	N=61	Agree	21 (34%)	19 (31%)	27 (44%)
25					
26		Neither Agree nor Disagree	18 (30%)	12 (20%)	4 (7%)
27					
28		Disagree	7 (11%)	6 (10%)	3 (5%)
29					
30		Strongly Disagree	2 (3%)	2 (3%)	1 (2%)
31					
32		Unanswered	2 (3%)	2 (3%)	1 (2%)
33					
34					

\*Based on 21 surveys using the phrasing "MyChildren's Patient Portal Website" and "MyChildren's Patient Portal App"

\*\*Based on 40 surveys using the phrasing "Online (including MyChildren's Patient Portal Website or App)"

While study participants exhibit low self-management skills and awareness of a patient portal, most welcome using it to manage their health. Further research is needed to validate whether a patient portal can promote self-management skills towards transition readiness among publicly insured Hispanic youths.



**Acknowledgements:** This manuscript was made possible thanks to the support of the Harvard Medical Faculty Teaching Compensation and the Stuart and Jane Weitzman Family Foundation. The findings of this study were shared through an oral presentation at the annual Pediatric Academic Societies Meeting in Baltimore, MD in May 2019.

**Financial Disclosure:** The Authors have no financial relationships relevant to this article to disclose.

**Conflict of Interest:** The Authors have no conflicts of interest relevant to this article to disclose.

**Ethic:** Please note this study was exempted as a quality improvement initiative by our Institutional Board of Review

**Authors Statement:** Dr. Sophie Allende-Richter conceptualized the study, critically reviewed and revised the manuscript for important intellectual content. Melanie Ramirez provided significant contributions to the data collection that led to this manuscript. She also drafted the initial manuscript, reviewed and revised it. Zana Khoury provided significant contributions to the data analysis and presentation used in this manuscript. She also critically reviewed and revised the manuscript. Dr. Fabienne Bourgeois provided substantial contribution to the manuscript conception and critically reviewed and revised it. Dr. Alexandra Epee-Bounya provided substantial contribution to the manuscript conception and critically reviewed and revised it. Dr. Kitty O'Hare provided substantial contribution to the manuscript conception and critically reviewed and revised it.

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*The information you provide will only be used by our medical staff to better meet your needs.*

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2. What is your gender:

- male
- female
- other (please specify):

#### Health Care Access

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- Disagree
- Agree
- Neither agree nor disagree
- Strongly disagree

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- Strongly agree
- Disagree
- Agree
- Neither agree nor disagree
- Strongly disagree

5. I know how to access my personal health care information (example: lab/ test results, physical exam forms, etc.)

- Strongly agree
- Disagree
- Agree
- Neither agree nor disagree
- Strongly disagree

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22  No  
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- 25  
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27  
28  No  
29

30 11. Have you ever used the MyChildren's patient portal?

- 31  
32  Yes  
33  
34  No  
35

36 12. I would prefer to schedule appointments:

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
37 In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38 Via phone call	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39 *Online (MyChildren's 40 Patient Portal Website or App)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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43 13. I would prefer to refill prescriptions:

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
44 In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45 Via phone call	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46 *Online (MyChildren's 47 Patient Portal Website or App)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. I would prefer to access personal health information:

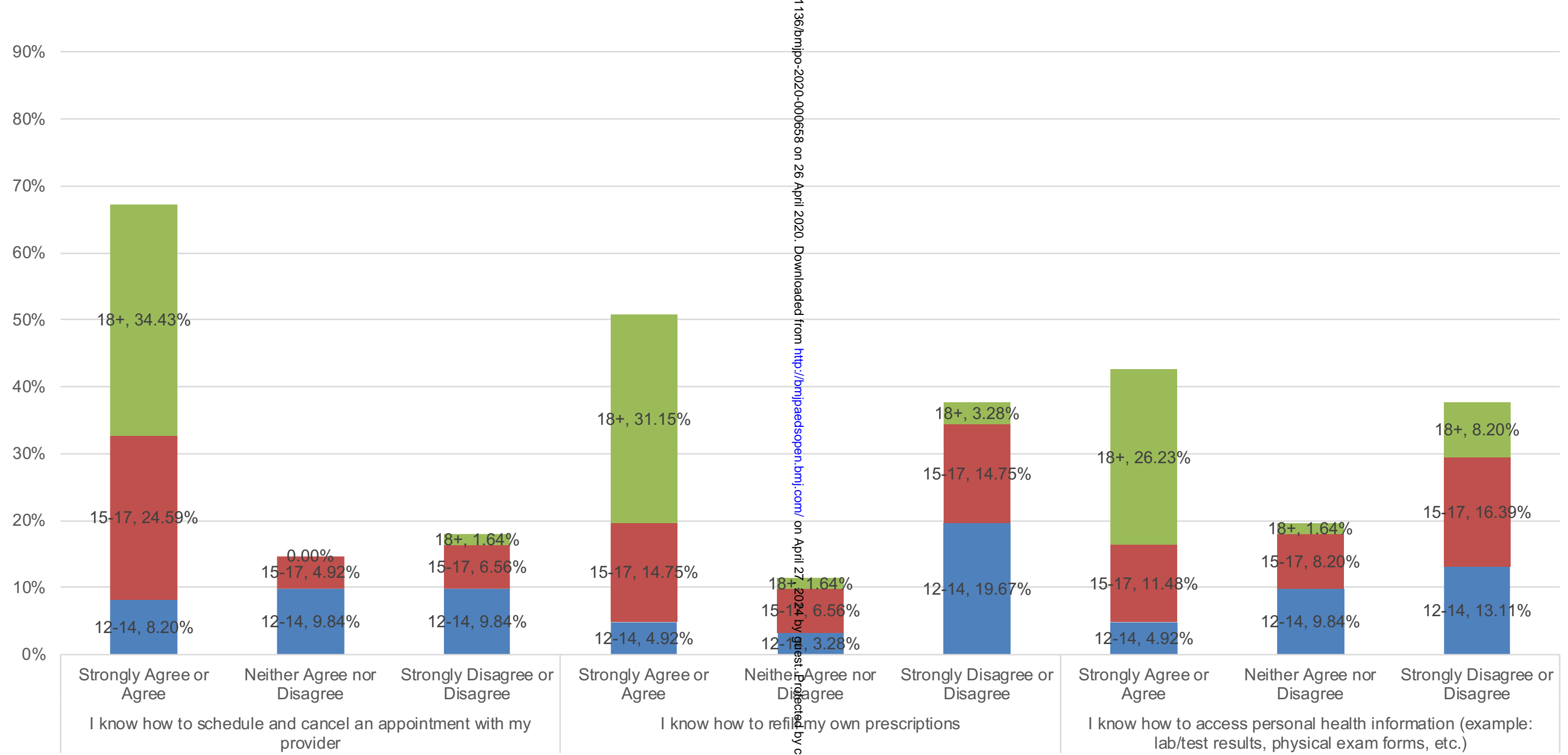
	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Via phone call	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Online (MyChildren's Patient Portal Website or App)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. How would you like to learn more about (check all that apply):

	In person	Flyer	Clinic Website	Martha Eliot Facebook	Messages from MyChildrens's Patient Portal
Health insurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patient privacy Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Martha Eliot Transition Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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The above graph displays participants answers by age to 3 out of the 6 self-management skill questions that were adapted from the TRAQ for this study