

Cancer Care-Related Social Media (SM) and Internet Usage Differences Between Age Groups Among Patients With Cancer

Lawson Eng, J Bender, K Hueniken, S Kassirian, D Yang, L Mitchell, C Paulo, A Magony, EC Smith, M Liang, MC Brown, W Xu, G Liu, AA Gupta

Lawson.eng@utoronto.ca

PGY-4 Medical Oncology Resident

Division of Medical Oncology, Department of Medicine
Princess Margaret Cancer Centre, University of Toronto

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Introduction

- The internet and social media are increasingly popular and accessible sources of medical information for cancer patients
 - Many cancer patients (68-89%) use the internet to research cancer-related information; 40% use it as their first source
- Seeking online information can help patients better understand and cope with their disease; social media can provide support
 - Information quality can vary
 - Patients may not disclose researching information to clinicians
- Adolescents and Young Adults (AYA) with cancer (age<40) are group of survivors with unique informational and support needs who grew up “digital natives”
- Better understanding how cancer survivors use and evaluate online information may help clinicians educate patients regarding researching information online

Objectives of Study

Overall Research Question:

What are the differences in how AYA and adult cancer survivors use social media and the internet for cancer care?

Aims:

1. To identify the prevalence of internet and social media use among cancer survivors
2. To determine if differences exist between AYA and non-AYA patients with respect to internet and social media use for cancer care
3. To identify factors associated with how confident cancer patients are at evaluating online cancer care information to help make cancer care related decisions

Patients and Methods

- Cross-sectional survey (Summer 2017) administered across all clinics at Princess Margaret Cancer Centre (Toronto, ON)
 - AYA patients targeted through local AYA program
- Questionnaire assessed:
 - Socio-demographics
 - Social media and Internet access (devices, data plans, social media accounts)
 - Use of internet and social media for cancer care
 - Confidence in computer and internet use (4 point Likert scale)
 - Confidence in using online information for health decisions related to cancer (5 point Likert scale)
- Chart review for clinico-pathological variables
- Statistical Analysis (SAS 9.4)
 - Descriptive statistics
 - Multivariate logistic regression models evaluating for factors associated with use of internet and social media for cancer care and confidence in evaluating online information

Results – Patient Characteristics

Variable	Subgroup	All Patients (n=320)	AYA (n=127)	Non-AYA (n=193)	P Value
Age	Median (Range)	49 (18-87)	30 (18-39)	58 (40-87)	<0.001
Gender	Female	56%	52%	58%	0.30
Ethnicity	Caucasian	70%	59%	77%	<0.001
Language	English	91%	88%	92%	0.33
Education	Post-Secondary	72%	71%	74%	0.56
Employment	Employed	61%	76%	52%	<0.001
Income	>\$100,000 Cdn	31%	24%	35%	0.22
Martial Status	Married	56%	42%	66%	<0.001
ECOG	0-1	80%	85%	79%	0.27
Stage at Diagnosis	Metastatic	20%	15%	23%	0.003
Treatment Intent	Curative	79%	90%	73%	<0.001

Disease site distribution: Breast (16%), GI (15%), GU (16%), Gynecological (14%), Hematological (13%), Lung (5%), Sarcoma (7%)

Results – Patient Internet/Social Media Use Characteristics

Variable	All Patients (n=320)	AYA (n=127)	Non-AYA (n=193)	P Value
Use the Internet	95%	100%	92%	<0.001
Use the Internet daily	96%	98%	95%	0.30
Have home internet	88%	91%	85%	0.16
Have a data plan	82%	91%	76%	0.001
Own smart phone	76%	91%	67%	<0.001
Android	38%	46%	32%	0.02
iPhone	51%	58%	47%	0.05
Blackberry	5%	2%	7%	0.03
Have a social media account	88%	97%	82%	<0.001
Facebook	72%	87%	62%	<0.001
Twitter	28%	37%	21%	0.003
Instagram	40%	63%	25%	<0.001
SnapChat	18%	36%	7%	<0.001

- Most patients use the internet (at least daily), have accessible online access and own a social media account

Results – Use of Internet and Social Media for Cancer Care

Variable	Subgroups	All Patients	AYA	Non-AYA	P Value
Confidence Using Computers/Internet	Very Confident/ Confident	57%/28%	82%/17%	39%/37%	<0.001
Confidence Using Online Information for Cancer Care	Strongly Agree or Agree	37%	44%	31%	0.022

- AYA cancer patients were more likely to be confident in using computers and evaluating online information for cancer care

Variable	All Patients	AYA	Non-AYA	P Value
Use the Internet for cancer care	75%	79%	72%	0.19
Use Social Media for cancer care	43%	52%	37%	0.008

- Most patients use the internet for cancer care; while about half use social media for cancer care

Results – Age and Confidence on Internet and Social Media Use

Internet Use for Cancer Care

Variable	Comparison	Univariate Analysis		Multivariate Analysis*	
		OR (95% CI)	P Value	aOR (95% CI)	P Value
Age	AYA vs Non-AYA	1.43 (0.85-2.46)	0.22	1.60 (0.93-2.81)	0.10
Confidence in Computer and Internet Use	Confident vs Not Confident	4.02 (2.09-7.74)	<0.001	5.36 (2.67-11.00)	<0.001

Social Media Use for Cancer Care

*Multivariate results are adjusted for gender

Variable	Comparison	Univariate Analysis		Multivariate Analysis**	
		OR (95% CI)	P Value	aOR (95% CI)	P Value
Age	AYA vs Non-AYA	1.86 (1.18-2.93)	0.01	1.75 (1.04-2.95)	0.04
Confidence in Computer and Internet Use	Confident vs Not Confident	5.34 (2.44-13.56)	<0.001	4.61 (1.98-12.14)	<0.001

**Multivariate results are adjusted for gender, education, employment status

- AYA patients and those confident in using computers/internet are more likely to use the internet and social media for cancer care

Results – Confidence in Using Online Information for Decisions

Variable	Comparison	Univariate Analysis		Multivariate Analysis*	
		OR (95% CI)	P Value	aOR (95% CI)	P Value
Age	AYA vs Non-AYA	1.77 (1.10-2.84)	0.02	1.45 (0.86-2.46)	0.17
Confidence in Computer and Internet Use	Confident vs Not Confident	7.01 (2.72-24.38)	<0.001	5.12 (1.92-17.81)	0.003

*Multivariate results are adjusted for education, employment status

- Age was not found associated with self-confidence in evaluating online information for cancer care decision making
- Confidence in using computers was associated with being able to evaluate online information for cancer care decision making
- Those with higher socio-economical status (completing post-secondary education and currently employed) were more likely to be confident evaluating online information for cancer care decision making

Conclusions

- Most cancer patients use the internet and half use social media for their cancer care
- Although many were confident using a computer, less than half were comfortable in evaluating online information for health care decisions
- Despite a higher use of the internet and social media for cancer care, AYA were not more comfortable at evaluating online information
- Confident computer users were more likely to both use the internet and social media for cancer care and also feel more confident in evaluating online information for cancer care
- Patient education programs should focus on helping improve patients' ability at evaluating online cancer care information and consider improve patient's confidence in using computers and internet when trying to achieving that goal

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