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Original Article/Research



Covid-19 and beyond: Broadening horizons about social media use in oncology. A survey study with healthcare professionals caring for youth with cancer

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ABSTRACT

Objectives: The study aimed to explore the attitudes of Swiss healthcare professionals toward the use of social media in adolescent and young adult oncology, and to examine whether the ongoing social restrictions due to COVID-19 might have altered these attitudes.

Methods: This research was a survey study. The subjects were healthcare providers working in pediatric or adult oncology settings in Switzerland. 62 providers completed the survey. We performed descriptive and inferential statistical analyses.

Results: While considered useful for various professional aspects (professional life 62.1%, educational purposes 72.7%, networking 83.3%, patient engagement 57.6%, clinical trial recruitment 51.5%), only a small proportion of participants actually used social media for professional reasons weekly (32.8%). Just over half considered themselves skillful in using these platforms (56.1%). Regression analysis revealed that self-assessed skillfulness with social media, the Covid-19 impact on attitudes, and the oncology setting, significantly predicted assessment of the usefulness of social media. Although, in answers to open items, institutional guidelines were deemed crucial to improve social media use, many respondents seemed unaware of their existence (50.8%). Only a minority reported an impact of Covid-19 on their attitudes towards the professional implementation of social media (25.0%).

Conclusion: The global health crisis creates important challenges for young patients with cancer and their healthcare providers. In times of social restrictions, social media may be a promising tools to facilitate health information provision, connectivity, and patient care. Virtual mentorship and targeted social media training interventions might be a good way to improve familiarity with using social media and to increase awareness about existing ethical guidelines for their use.

Public interest summary

The impact of cancer upon the physical and psychological well-being of adolescents and young adults is enormous. The COVID-19 pandemic seems to have contributed to increased symptoms of anxiety among these young patients. Research has shown that in times of social restrictions, social media may be promising tools to

facilitate information provision, connectivity, and patient care. In this survey study, we wanted to explore the attitudes of Swiss healthcare professionals about the use of social media when caring for youth with cancer, and to see whether the pandemic might have had an impact upon these attitudes. Our findings show that although many oncologists consider social media to be useful, only a minority actually uses it in practice. We argue that it is crucial to develop social media guidelines and training courses that are targeted towards healthcare professionals in both content (i.e.

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practical) and format (i.e. time-flexible).

Introduction

Cancer is still the most common disease-related cause of death among adolescent and young adults (AYA) in high-income countries [1]. Despite improved cure rates [2], long-term survival of AYA cancer survivors is significantly inferior compared with the general population [3]. The underlying reasons for this disparity are likely to be a combination of medical-biological (e.g. unique cancer types in AYA and their inferior response to treatment) and psycho-social factors (e.g. AYA are developing physically, cognitively and emotionally) [2,4,5].

The physical, emotional, existential, and social impact of cancer upon AYA's wellbeing is enormous. Whilst it is increasingly recognized that AYA are a special group, in most countries their needs go unmet. Due to small patient numbers, specialized AYA treatment centers are rare or non-existent. Pediatric and adult care programs are not usually used to manage the problems unique to this population [6–8]. The COVID-19 pandemic risks exacerbating these already existing vulnerabilities as oncology departments worldwide are facing the challenge of balancing the risk of interrupting treatment, follow-up care, and screening with the risk of exposing patients to infection [9].

The pandemic is likely to have an adverse effect not only on the physical, but also on the psycho-social wellbeing of cancer patients [10]. According to a recent qualitative survey study in Italy [11], AYA reported being worried about getting infected and suffering from severe complications. These findings are confirmed by the cross-sectional study of Košir and colleagues which showed that 6 in 10 AYA felt more anxious since the COVID-19 outbreak [12]. Their concerns were mostly related to compromised immunity, and the impact of delayed treatment on survivorship. Patient education is crucial to adequately support AYA and to help them cope with this stress. However, only one quarter of the participants declared receiving COVID-19 related information from healthcare professionals (HCPs) and more than 50% expressed the need for more AYA tailored communication [12].

Research indicates that during the pandemic patients have sought informational and emotional support on social media (SM), and Twitter in particular [13]. This should not come as a surprise: SM platforms are increasingly recognized as promising tools for the delivery of health information; psychosocial support; and behavioral interventions, especially to AYA with cancer given the extensive use of SM among this age cohort [14–16]. A recent interview study on the SM preferences and habits of AYA with cancer showed that SM plays an important role in young patients' psychosocial development throughout treatment and that it is important for HCPs to better understand the benefits of SM [17]. However, although for AYA with cancer SM constitute a kind of life-line to the outside world, various studies have foregrounded the fundamental ambivalence of these digital spaces [18–23]: SM might negatively affect AYA's mental wellbeing by exposing them to harmful or distressing information; harassing content; and to feelings of envy; shame; and frustration, while at the same time offering little or no outlet for negative thoughts because of a prevalent positive posting culture.

A recent survey of the European Society for Medical Oncology (ESMO) and the OncoAlert showed that the overall oncology community is satisfied with the role SM has played during the current health crisis [24]. In fact, research shows that during the pandemic, oncologists have used SM to exchange information and experiences with colleagues across the globe [25]. Other HCPs have used WhatsApp to respond in a time-effective way to queries from cancer patients [26]. SM networks have also proved to be an important means of engaging the public in preventive behaviors against COVID-19 infection [27]. On the other hand, the misinformation related to the pandemic, circulating on SM is a serious problem that constitutes an important threat to public health [28,29]. Regrettably, SM is also used to advertise unapproved diagnostic

tests and false cancer cures. In times of lockdown, with the disruption of cancer protocols, patients and families are even more susceptible to these kinds of products [30].

Research before the pandemic showed that despite the potential patient – and HCP – related benefits of SM, HCPs often take a conflicted stand on adopting SM for professional reasons due to lack of time; health-related misinformation on SM; privacy concerns; and the desire to maintain a professional relationship with patients [31–33]. A recent (pre-Covid-19) focus-group study with HCPs caring for AYA cancer patients and survivors in Switzerland confirmed these findings [34]. The study further indicated that due to their intimate and long-term relationships with patients, nurses seem to find it more challenging to ward off online requests from patients, and (because of a lack of virtual mentorship) often feel uncertain about how to maintain online professionalism. The aim of our present exploratory survey study was to explore (a) the attitudes of Swiss HCPs towards SM use in AYA oncology and (b) whether the ongoing social restrictions due to the pandemic might have altered these attitudes.

Methods

Study design

Using an online survey tool (soscisurvey.de), we distributed a cross-sectional survey to capture Swiss AYA oncology providers' general attitudes towards SM as a support tool in their care of AYAs, and to examine the potential impact of the Covid-19 pandemic on their professional SM use. This quantitative portion of our study was part of a larger project on the use of SM in AYA oncology. That project which aimed to explore HCPs apparent reticence to make greater use of SM, to explore their perceptions of the barriers to integrate these platforms on an institutional level, and to better understand their view on AYA's cancer-related use of SM. The qualitative results have been reported elsewhere [34].

A clarification of responsibility (jurisdictional inquiry) was submitted to the relevant ethics committee (EKNZ, Basel) which stated that the research project falls outside the scope of the Swiss Human Research Act (Art. 2) because data was collected anonymously, and experts (who are not vulnerable) were surveyed. The EKNZ stated that the project fulfills the general ethical and scientific standards for research with humans. Furthermore, the online survey tool was approved by the University's data protection office.

Study population and study sample

Since AYA cancer patients are treated either in pediatric or adult oncology settings, we approached oncology providers from both settings. Oncology providers included all occupational groups (e.g. nurses, physicians, psycho-oncologists, and social workers) involved in the care of AYA with cancer in Switzerland. The only inclusion criterion was that participating HCPs were caring, or had cared, for AYA patients or survivors. A total of 79 individuals accessed the online survey, 73 participated, and 62 completed the survey. Accordingly, survey completion rate was 84.9% (62/73). As a result, the N varies across variables. We cannot confidently estimate the number of providers who received the survey and thus survey response rate cannot be calculated. Participants came from all three major Swiss language regions (German, French, Italian); and from both pediatric and adult oncology settings.

Recruitment and data collection

The period of data collection was between July and October 2020. Based on previous collaborations during the qualitative part of the study, we used quota sampling to recruit participants. That is, we explicitly targeted subpopulations within the population of AYA oncology providers (e.g. pediatric and adult providers; different

occupational groups, particularly physicians and nurses; providers from different major Swiss language regions, namely German vs. Romance) to capture variation in these key characteristics of the study population. Moreover, for each subpopulation, we aimed to recruit at least 25 providers to ensure that subpopulations are each adequately represented.

The study team requested each contact person at collaborating oncology centers to share the survey among their colleagues and to invite them to fill in the survey. The contact persons sent the link to access the online survey by email to their colleagues. The survey invitation was sent to eight adult centers and seven pediatric. Once data collection was completed, data was exported from the online tool and imported into statistical software.

Study survey

The study instrument was developed based on a scoping review of the literature [15] and input from collaborating physicians. Focus groups with AYA oncology providers and interviews with individual AYA cancer patients informed the survey tool [34]. The survey captured the following data: (a) demographics and professional background; (b) personal and professional SM use; (c) HCP's assessments of the usefulness of SM for various professional purposes (e.g. networking, engagement with patients, education; professional purposes were selected based on a review of the literature) [15]; (d) possible Covid-19 impact on the professional use of SM; (e) institutional use of SM and guidelines on SM use; and (f) challenges, benefits, and a facilitation of SM use in AYA oncology. The questionnaire consisted of items with categorical responses (e.g. department, language region, SM use), Likert scales (e.g. usefulness of SM), and open items (facilitation of SM use in AYA oncology). The tool was pilot tested by 3 AYA oncology providers in July 2020. Minor adaptations were made which did not change the survey's overall structure and purpose.

Statistical analyses

Statistical analyses were performed using SPSS 26.0 (SPSS Inc., Chicago, IL). First, descriptive analyses were performed. Second, independent factors associated with providers' assessments of the usefulness of SM in AYA oncology were determined using multiple linear regression analysis. Differences in these assessments between occupational groups were examined using ANOVA analysis. Statistical significance level was set at $p < .05$.

We evaluated factors associated with providers' usefulness assessments (dependent variable) using multiple linear regression. For this purpose, we calculated a usefulness assessment sum score composed of the five usefulness assessments. This sum score was reliable (Cronbach's alpha: $\alpha=0.812$) and normally distributed (Shapiro-Wilk: $p=.141$, $M=18.4$, $SD=3.2$). Based on theoretical (i.e. research team's expertise, literature review) [15] and sample size/predictor ratio considerations [35] we checked the linearity (scatter plots) of the relationships between the dependent variable and the following five predictor variables: providers' skillfulness in using SM (5 point Likert-item: "Do you feel skillful in using social media?"), Covid-19 impact on attitudes towards SM use in AYA oncology (dichotomous item: "Did the COVID-19 emergency have any impact on your attitudes towards the usefulness of social media in your professional life?"), language region (German or Romance), work experience (in years; positively correlated with age: $r = 0.889$, $p = .000$), oncology setting (pediatric or adult). Since the relationship between work experience and the usefulness assessment was not linear, we did not include it in the model. In addition to linearity, the remaining assumptions were checked before interpreting the multiple linear regression model. All assumptions were met: no multicollinearity (VIF and tolerance), independent residuals (Durbin-Watson test), homoscedasticity (plotting the standardized values the model predicts against the standardized residuals obtained), normally distributed residuals (P-P plot), no relevant outliers (Cook's distance). Finally,

an F-test was conducted to test for the statistical significance of the overall model fit, indicating that the predictors included in the model significantly contributed to the explanation of the usefulness assessment ($F(4, 57) = 5.45$, $p = .001$, $R^2=0.276$). Adjusted R^2 was 0.226, indicating that 22.6% of variance was explained by the multiple regression model.

Results

Providers' demographic characteristics and use of social media

Of the AYA oncology providers, 72% were women, 35% worked in pediatric oncology settings, 51% in a university hospital, 44% were nurses, and 40% physicians. Almost all providers used SM daily for private reasons. Half of them used SM professionally, and the majority did so only rarely. It must be noted that some participants did not answer all items of the survey, resulting in missing values. This resulted in different sample sizes for some of the variables and analyses. Further demographic and SM use related information are presented in Table 1.

Providers' assessments of usefulness of social media

Only a small majority of HCPs (37 out of 66) felt skillful in using SM (56.1% either agreed or strongly agreed, 21.2% either disagreed or strongly disagreed, 22.7% were uncertain). Providers assessed the usefulness of SM for various professional purposes on a five-point Likert scale (range: 1–5; Fig. 1). Overall, they tended towards assessing SM as useful for all five professional purposes ($N = 66$; Fig. 1), as indicated by agreement or strong agreement to the following items: 62.1% for professional life ($M = 3.6$, $SD=0.9$), 72.2% for educational purposes ($M = 3.8$, $SD=0.8$), 83.3% for networking ($M = 4.0$, $SD=0.7$), 57.6% for engagement with patients ($M = 3.6$, $SD=0.9$), and 51.5% for clinical trial recruitment ($M = 3.4$, $SD=1.0$).

Table 1

Demographics and social media use.

Demographics	
Age ($N = 70$)	$M = 42.8$ ($SD=9.9$), $Mdn=42.5$, $Mo=39$, $Min=26$, $Max=65$ 25–34: 25.7%, 35–44: 28.6%, 45–54: 32.9%, 55–65: 12.9%
Gender ($N = 72$)	72.2% woman, 27.8% man
Institution ($N = 72$)	51.4% university hospital
Language region ($N = 71$)	35.2% German, 14.1% French, 50.7% Italian
Department ($N = 72$)	65.3% adult oncology
Occupational group ($N = 72$)	44.4% nurse, 40.3% physician, 15.3% other ²
Professional experience ¹ ($N = 72$)	$M = 16.4$ ($SD=10.5$), $Mdn=15.0$, $Mo^3=10$, $Min=0$, $Max=49$ 0–10: 34.7%, 11–20: 34.7%, 21–30: 22.2%, 31–40: 5.6%, 41–50: 2.8%
Private and professional social media use	
Private ⁴ : which ($N = 67$)	1.5% none, 97.0% WhatsApp, 50.7% Facebook, 37.3% IG, 32.8% YouTube, 19.4% LinkedIn, 14.9% Twitter, 6.0% TikTok
Private: how often ($N = 67$)	89.6% daily, 7.5% weekly, 3.0% rarely
Professional ⁴ : which ($N = 66$)	50.0% none, 24.2% LinkedIn, 19.7% WhatsApp, 9.1% Facebook, 4.5% Twitter
Professional: how often ($N = 61$)	14.8% daily, 18.0% weekly, 11.5% monthly, 55.7% rarely
Professional: reasons ⁴ ($N = 67$)	27.0% none, 42.9% education, 41.3 networking, 23.8% exchange with colleagues, 9.5% dissemination research, 9.5% patient education

¹ in years.

² consisted of psycho-oncologists, psychiatrists, social workers, study coordinators, technicians, admin.

³ multiple modes: 10 and 20, smallest is presented.

⁴ multiple choice item, and thus percentages can add up to more than 100%.

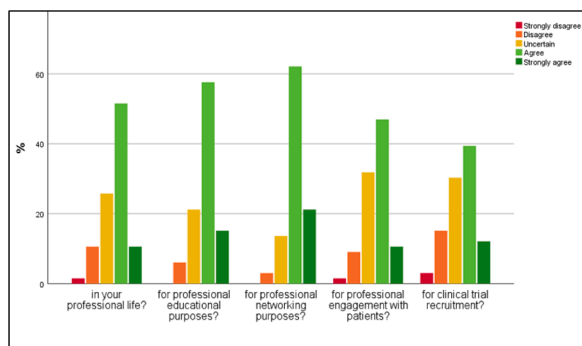


Fig. 1. Providers' usefulness assessments.

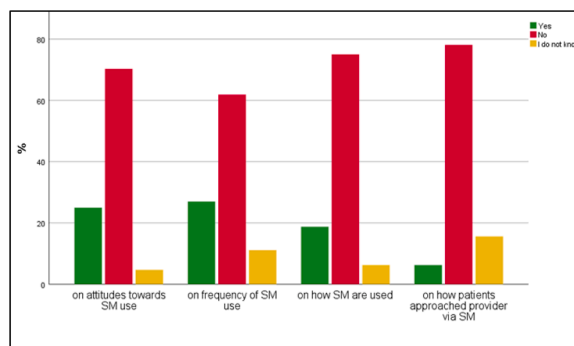


Fig. 2. Impact of Covid-19.

Regression analysis revealed that self-assessed skillfulness with social media; the Covid-19 impact on attitudes; and the oncology setting, significantly predicted assessment of the usefulness of SM in AYA oncology. In particular, the more skillful providers thought they were in using SM; the stronger the impact of Covid-19 on attitudes towards SM use in AYA oncology; and the “more pediatric” the oncology setting, the greater was the usefulness assessment (Table 2).

Finally, analysis of variance between the three occupational groups (nurses, physicians, other) was conducted for the usefulness assessment, revealing that there were no significant effects of occupational groups on the usefulness assessment: $F(2,63) = 0.363, p = 697$. Moreover, there was no statistically significant correlation between providers' usefulness assessment and their age ($r = -0.182, p = .151$) or work experience ($r = -0.081, p = .516$), respectively.

Covid-19 impact on providers' professional social media attitudes and use

Only a minority of AYA oncology providers reported an impact of Covid-19 on their attitudes towards the use of SM in their professional lives (16/64), on the frequency of professional SM use (17/63), on how they use SM professionally (12/64), and on how patients approached providers via SM (4/64) Fig. 2. depicts these four variables in more detail. Participants who responded that the frequency of their professional SM use had increased due to Covid-19 were asked to specify the increase in percentages. Out of 17 providers whose professional SM use had increased (27%), 15 specified the respective increase: $M = 28.3\%$, $SD=16.0\%$. In open items in which HCPs could elucidate their change in SM attitudes and use, exchange of information and experiences with colleagues, as well as timely responses to patient and family queries, were most often cited as important reasons for increased use. One participant tried to combat misinformation: «It happened that on Twitter I argued with some "fake news spreaders" ».

Table 2
Regression analysis-coefficients.

	Unstandardized coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	20.296	2.169		9.357	.000		
Setting ¹	-2.347	.887	-0.348	-2.645	.011	.735	1.360
Language region ²	.884	.879	.132	1.005	.319	.735	1.361
Covid-Impact ³	-2.118	.738	-0.336	-2.869	.006	.926	1.079
Skillfulness ⁴	1.223	.354	.395	3.458	.001	.975	1.026

Dependent variable: usefulness assessment;

¹ dichotomous variable: pediatric vs. adult;

² dichotomous variable: German vs. Romance (French and Italian);

³ Dichotomous variable: Covid-19 impact vs. no Covid-19 impact on attitudes towards SM use;

⁴ 5-point Likert item, ranging from strongly disagree to strongly agree (“Do you feel skillful in using SM?”).

Institutional use of SM and guidelines on social media use

With respect to the question of whether their institution has SM channels ($N = 61$), more than a third of AYA oncology providers reported that they did not know (34.4%). More than a third stated that their institution has at least one SM channel (36.1%). In the open comments, Facebook (12 out of 18 responses) was most frequently cited as institutional SM platform, followed by Instagram (7 out of 18 responses) and Twitter (5 out of 18 responses). Almost 30 percent (29.5%) of providers reported that their institution has no SM channel.

With respect to the question of whether their institution provides guidelines on how to use SM ($N = 61$), half of HCPs did not know (50.8%). Almost 30 percent reported that their institution provides guidelines (27.9%), and one fifth stated that their institution does not provide any guidelines (21.3%). Those who declared that institutional guidelines were in place, most often referred to a code of conduct or privacy guidelines, but did not report specific SM guidelines.

Challenges, benefits, and facilitation of social media use

HCPs most frequently perceived the following barriers to an implementation of SM in AYA oncology care: legal and ethical issues (43/59), professional boundary violations (27/59), and a lack of an institutional account and a lack of time (each 22/59). The most frequently perceived benefits of the implementation of SM were: professional networking (35/58), keeping abreast (31/58), and patient education (29/58) (see Fig. 3).

In answer to open items, improved training and education of medical staff, as well as clear ethical guidelines were most frequently cited to facilitate the implementation of SM. Two HCPs reported the need for more funding. Two other participants suggested experimenting with telemedicine once or twice a week, or having a specific HCP who is an expert in that field. One provider reported that proper implementation of SM requires dedicated professionals as doctors are not communication experts.

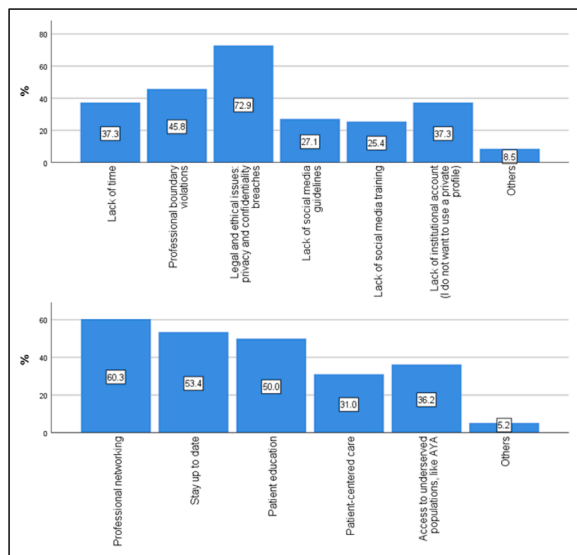


Fig. 3. Challenges and benefits of SM use in AYA oncology. Open questions: from the text of the responses we report here similar answers together.

Discussion

Recently, doctor A. Chiang, founding member of the Association for Healthcare Social Media (AHSM), declared that «Social media is not only a great way to distribute health knowledge, it is absolutely imperative in 2020». Although useful for all medical specialties, SM is especially relevant within oncology because it allows physicians to keep abreast with the intense pace of change in cancer care by offering opportunities for networking, education and knowledge dissemination [36]. Richard Horton, editor-in-chief of the *Lancet*, has pointed out, that this does not mean that we do not need to be careful about the misinformation that circulates [29]. Much more can and should be done to counter the spread of false information. HCPs and healthcare institutions in particular, can take a more active role in this process. Furthermore, we should not forget that within oncology long-term patient-provider relationships are common, considering that in many cases cancer is a manageable chronic disease. The use of SM may offer novel means to allow a continuity of care and communication. This may explain why, over the last decade, cancer associations and medical centers worldwide have encouraged HCPs to actively integrate SM in their clinical practice and why this call has become even stronger with the outbreak of COVID-19 due to reduced direct contact with patients during the pandemic. A recent (pre-pandemic) exploratory study in Switzerland indicated that HCPs caring for AYA with cancer are hesitant about stepping into the SM arena because they consider it an unsafe professional space [34]. The present survey study aimed to complement these results by examining a potential impact of Covid-19 on HCPs views and professional SM use.

The results show that, although HCPs working within the Swiss AYA oncology setting tend to consider SM to be useful for clinical practice, they rarely *actually* use these networks for professional reasons. Different explanations are possible for this paradox.

First, research shows that HCPs who make use of SM for work-related purposes are generally between 24 and 34 years old [31,32,37], whereas the mean age of our participants is 42, an age cohort which might have less familiarity, and thus more difficulty in adopting new technologies. Indeed, only a small majority of respondents considered themselves to be skillful in using SM. Second, in line with other studies [31–34], HCPs expressed concern about patient privacy, violations of professional boundaries, and lack of time. These fears might further increase providers' uncertainty about how to implement SM in AYA care. Third,

although clear ethical guidelines were cited as an important means to improve the use of SM – like for the FG study [34] – many respondents admitted to being “ignorant” about the existence of SM guidelines on an institutional level. One third was unaware of their hospital's presence on SM. These findings are quite worrisome and might explain why HCPs continue to find it difficult to navigate the SM landscape. Our results are also surprising given that The Swiss Medical Association [38], and various hospitals in Switzerland, have developed recommendations on safe SM use.

In the United States, 66% of oncologists answered positively to the Twitter poll question “Has social media helped you navigate the #coronavirus pandemic more successfully?” [25]. In our survey, only a minority of HCPs (across various occupational groups) reported that the COVID-19 pandemic has positively impacted their usefulness assessment and professional use of SM. In other words, before the health crisis, but for most of them the pandemic did not result in allocating an increased importance to SM, nor did it lead to an increased use. Only the group of respondents that described itself to be social media-savvy reported a more positive view of the importance of SM during the pandemic. Like in the USA [25], connectivity with the oncology community seems to have been one of the main drivers to use SM.

Our survey findings can have different explanations. First, those who are inexperienced using SM networks in their professional lives, are unlikely to do so in a situation of acute stress such as the one caused by the pandemic. Second, as research indicates [39], cultural differences might have an important impact on SM perceptions and behavior: EU users appear to be more hesitant to participate in online communication compared to users in the USA. Moreover, in a small and well-connected country like Switzerland (with limited geographical distances) personal contact with other providers, even during the current health crisis, are quite regular. Third, we should not forget that HCPs are generally not at ease with using SM for direct patient care [40] and that this might not have changed initially with the COVID-19 outbreak. This might be a source of concern if we consider that the pandemic is likely to exacerbate the already existing vulnerabilities of AYA for whom SM are an important means to convey health information.

Our findings suggest feasible ways to improve the implementation of SM in AYA oncology. One of the major obstacles to successful implementation seems to be HCPs modest awareness of existing guidelines which might help them to navigate these networks in a safe and confident way. More efforts should be made by healthcare institutions not only to disseminate guidelines among care providers, but also to make them applicable to the oncology context. A possible way of doing this might be for hospitals to promote virtual mentorship: to “use” SM savvy care providers as “role models” for a responsible use of SM. In fact, our findings showed that the more skillful a provider was in using SM, the higher their usefulness assessment of SM. This means that they can exert leverage on others to participate in SM educational interventions. Such SM savvy “bridging” figures might be particularly important for nurses and younger HCPs who tend to have a more intimate relationship with patients, and are therefore more likely to be exposed to SM entering the patient-caregiver relationship.

It is crucial, however, that both guidelines and SM training are targeted in content and format towards HCPs. This means that they should provide practical guidance on how to use social media rather than focus on theoretical restrictions and be time-flexible. SM training and education of HCPs, however, do not diminish the importance of regulations that protect patient privacy and confidentiality. In other words, in this paper we do not assume that SM are *a priori* beneficial to youth with cancer, nor that HCPs should uncritically embrace these digital platforms in their clinical practice.

Limitations

Non-probabilistic quota sampling might have resulted in an

overrepresentation of HCPs with an interest in, or a strong opinion on, the topic. However, this possible bias does not invalidate our study. In contrast, it renders its findings even more remarkable as it means even among HCPs who are interested in SM, professional use remains comparatively low.

Another limitation is that since we cannot estimate the response rate, we cannot determine whether our sample is representative of Swiss AYA oncology providers. However, Switzerland is a small country with only 9 pediatric (among which 5 university centers) and 15 adult oncology centers (among which 5 university centers). However, since AYA represent only a small fraction of the overall cancer population, the number of Swiss AYA oncology providers is small. This means that the responders are likely to present a significant portion of professionals caring for AYA. We captured data from all three major language regions, from both the adult and pediatric setting, and from all occupational groups. Finally, because we did not obtain data on oncology centers (due to the anonymity of data collection), analysis could not be adjusted for clustering within oncology centers (i.e. multiple HCPs per center).

Conclusion

In times of global health crisis, SM platforms may be promising tools to facilitate health information provision, connectivity, and patient care. Our study shows that although many Swiss oncology providers consider SM to be useful when caring for AYA, only a minority actually implement them in practice. Modest familiarity with SM use and existing guidelines, might be at the root of this apparent discrepancy. Virtual mentorship and targeted SM training interventions might be the best way forward. In the context of the ongoing COVID-19 pandemic, future longitudinal research could help track how providers' SM attitudes change. Similarly, it would be important to understand how young cancer patients' social media use and perspectives have changed in light of the persisting corona healthcare crisis.

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Ethics approval

A clarification of responsibility (jurisdictional inquiry) was submitted to the leading ethics committee (EKNZ, Basel) which stated that the research project falls outside the scope of the Swiss Human Research Act (Art. 2) because data was collected anonymously and health experts were surveyed. The EKNZ stated that the project fulfills the general ethical and scientific standards for research with humans. Furthermore, the online survey tool was approved by the University's data protection office.

Patient consent

Not required

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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