eenagers throughout the country regularly use the internet, cell phones, and video games to gather information and communicate with each other. This ability to interact with others is the unique feature of social media which provides powerful new ways for teens to create and navigate their social environments.

Teen's use of social media occurs simultaneously with their developing identity, emerging sexuality, physical development, and moral consciousness. In this brief, we examine how social media impacts the behavioral health of California's adolescents.

TYPE **EXAMPLE** % TEENS WHO USE NATIONALLY Text Messaging Cell phone feature 75% of all teens own a cell phone

MOST	Commonly	Used	Social	Media	by	leens	

10/4 1105005115		88% of cell phone-owning teens text 72% of all teens use text messaging
Social Networking Sites	Facebook, MySpace	73% of online teens have used a social networking site
Online video sites	YouTube.com	63% of online teens watch online videos
Online gaming	SecondLife.com	61% of online youth play games online, including multiplayer online games
Blogging within social networking sites	Facebook or MySpace feature	52% of online teens have commented on a blog

Source: (Lenhart, 2010) except for Online video sites (Nielsen, 2009) & Online gaming (McAfee, 2010)

Benefits of Social Media on Adolescent Health

Overall, social media use is associated with many benefits for adolescent health and development. An examination of youth's experiences with social media, which included teens from California's urban, suburban and rural communities, documented powerful new ways in which youth use social media.

- Most teens use online networks to extend the friendships they already have from other areas of their life, such as school, religious organizations, sports and other local activities (Ito, 2008). Social networking sites provide a way for teens to experience connectedness and opportunities to learn from each other (Ito, 2008).
- Social media can provide a supportive environment to explore romance, friendship, and social status, while also providing teens an opportunity to share and discuss their taste in music, knowledge of television and movies, online videos/games, and other aspects of teen culture (Ito, 2008).

Teens from lower income families (those earning less than \$30,000 annually) are more likely to use online social networks (80%) than teens from wealthier households (70%) (Lenhart, 2010).

- Social networking sites can allow teens to find support online that they may lack in traditional relationships, especially for teens who are often marginalized, such as lesbian, gay, bi and transgendered (LGBT) teens, those who are living with an illness or disability, or those who may feel physically unattractive or socially reticent (McKenna & Bargh, 2000).
- Teens look to social networks as a key source of information and advice in a critical developmental period with 57% of teen social networkers saying they look to their online social network for advice (Nielsen, 2009).
- Teens also use online searches to gain answers to many of their health concerns with 31% of online teens getting health, dieting, or physical fitness information from the internet. Seventeen percent of teens who use the internet report they use it to gather information about health topics that are hard to discuss with others, such as drug use and sexual health (Lenhart, 2010).



Cell phones and features, such as texting, are very popular with teens and parents. Over 90% of parents and teens backed the assertion that they like cell phones because they can "keep in touch no matter where I am" (Lenhart, Ling, Campbell & Purcell, 2010). Teens have found that they gained more independence and freedom through owning a cell phone that allows them to communicate with their parents and that they often use voice calling to seek out social support when needed to discuss personal matters (Lenhart, Ling, Campbell & Purcell, 2010).

What Teens Do Online: Protective Aspects

ACTIVITY	% OF TEENS (N=760-763)
Join an online community or a "group" on Facebook or MySpace in support of a cause	54
Post creative writing or artwork that you've done	53
Post or share videos or music that you've created	50
Organize or invite people to an event using a social networking site like Facebook or MySpace	45
Volunteer for a campaign, nonprofit organization, or charity	34
Participate in online study groups	26

Available from http://www.commonsensemedia.org/sites/default/files/Social%20Networking%20Poll%20Summary%20Results.pdf

Risks of Social Media

While media use is an integral part of the daily life of adolescents, there are a number of risks associated with social media use, specifically, negative effects on mental health, cyberbullying, texting/sexting, dangers of sexual solicitation, and exposure to problematic and illegal content and privacy violations.

The risks that teens face online are similar to those faced offline. However, the risk profile for the use of various types of social media depends on the type of risk, a teen's use of the media, and the psychological makeup of the teen using them. It is important to note that teens most at risk often engage in risky behaviors offline and also have difficulties in other parts of their lives (Berkman, 2010).

Social Media and Adolescent Mental Health

Most teens surveyed who are regular media users have lots of friends, get along well with their parents, and are happy at school (Rideout, 2010). However, peer rejection and a lack of close friends are among the strongest predictors of depression and negative self-views (Hartup, 1996). Teens who are the heaviest media users report being less content and are more likely to report that they get into trouble a lot, are often sad or unhappy, and are often bored (Rideout, 2010).

- In California, 21% of teens surveyed were found to be at risk for depression (California Health Interview Survey, 2005).
- In addition, 68% of girls nationally report having a negative experience on a social networking site (Girl Scout Study, 2011). Some teens have reported that Facebook can incite fights, especially with the creation of "burn" pages created for the explicit purpose of taunting or teasing others (Boyar, 2010).

Cyberbullying

Use of social media also creates an opportunity for emotional distress from receiving threatening, harassing, or humiliating communication from another teen, called cyberbullying.

- In California, approximately 23% of teens report being threatened by a peer (CHIS, 2001). Cyberbullying appears similar in prevalence to offline bullying (Lenhart, 2007).
- Cyberbullying has been shown to cause higher levels of depression and anxiety for victims than traditional bullying and has also been connected to cases of youth suicide with teens known to engage in reading hurtful comments days before their suicide attempts (Kowalski, 2009).

- Those most at risk for cyberbullying include lesbian, gay, bisexual, transgender (LGBT) and allied youth. "Allied youth" refers to young people who are openly supportive of LGBT youth. A 2010 study found that 54% of these youths report being cyberbullied within the last 30 days (Blumenfeld, 2010).
- Females are the next most likely group to be cyberbullied, with 21% of female teens reporting cyberbullying (Blumenfeld, 2010).
- Those who are victims of online harassment are also more likely to be perpetrators (Ybarra, 2004). Teens most at risk for cyberbullying are also those at risk of offline harms, such as teens who have experienced sexual or physical abuse or those living in poor home environments (Berkman, 2008).

Texting/Sexting

While most teens use messaging responsibly, it is still an extremely powerful and private communication tool that can be used irresponsibly. With texting, teens cannot see the reaction of the person receiving the message, so their actions can be separated from the consequences (Commonsense media, Parenting Tip Sheet, 2010).

- Almost half of teen cell phone owners reported regret over a text message they have sent (Lenhart, Ling, Campbell & Purcell, 2007).
- Texting can also be used to bully or humiliate people. An embarrassing or upsetting image or video can quickly be transmitted or uploaded to an online video sharing site like YouTube via cell phones or the internet.
- Sexting is a form of texting where individuals send or receive sexually suggestive nude or nearly nude images or messages. As many as 20% of teens reported they have sent/posted nude or semi-nude pictures or videos of themselves (National Campaign to Prevent Teen and Unplanned Pregnancy, 2008; SexTech, 2008).
- In California, sexting is a misdemeanor offense for teens under 18. Teens also can be suspended from school and victims can experience emotional distress with accompanying mental health conditions (O'Keefe, 2011).
- Only 4% of teens age 12-17 report having sent these types of messages. However, when older teens are included, 20% aged 13-19 say they have sent/posted nude or semi-nude images of themselves (National Campaign to Prevent Teen and Unplanned Pregnancy, 2008).

Adolescent Relationship Abuse and Social Media

- Teens in relationships may also receive nude pictures or be pressured to send nude pictures of themselves to a partner. Relationship abuse can also include sending nonstop text messages or posting cruel comments on a boyfriend's or girlfriend's Facebook or MySpace page (Clifford, 2009).
- Cell phones, instant messaging, and social networking websites are all increasingly being used to monitor, threaten, and harass relationship partners. One in three teens in relationships has been text messaged up to 30 times an hour by a partner to find out where they are, what they are doing, or who they are with (Liz Claiborne, 2008).

Online Sexual Solicitation and Predation

Unwanted online sexual solicitation is defined as "the act of encouraging someone to talk about sex, to do something sexual, or to share personal sexual information even when that person does not want to" (Ybarra, 2007).

Online sexual predation occurs when an adult makes contact with a minor with intent to engage in sexual activities that would result in statutory rape. Youth are much more likely to receive sexual solicitation between same-age youth than sexual predation and most of these solicitations come from same-age peers who are known offline (Collins, 2011).

The sexual solicitation rate for teens is estimated at between 13-19% (Wolak, Mitchell & Finkelor, 2006). In addition, 16% of teens using the internet said they have considered meeting someone they have only talked to online and 8% have actually done so (Cox, 2007).

Privacy

Most studies show that teens do care about privacy. When teens are concerned about risks, they will engage in privacy protecting behaviors, such as adjusting their profiles to "private" from "public" access, refusing to provide identifying information or false information, and avoiding certain websites (Youn, 2009).

However, most youth do not read websites' privacy policies or may be unaware that their information is at risk of disclosure to third parties like advertisers. Though concerned about talking to people they don't know online, teens appear to be less worried about posting information about themselves. Twenty-one percent of teens say it is safe to post personal information, including photos, online to a public profile (Cox, 2007).

Digital Divide

There has been a closing of the access gap for some populations using new technologies. While teen internet access is highest among White teens with college-educated parents and annual household incomes above \$50,000, there has been a dramatic shift in Black and Latino use of new technologies (Purcell, 2011).

- Black and Latino teens are now just as likely as White teens to create a social network profile (Lenhart, 2010).
- The amount of time teens spend using media throughout the day has risen sharply, especially among Blacks and Latinos. Black and Latino youth are also the heaviest consumers of media content via the cell phone (Rideout, 2010).

However, there continues to be a significant gap in access for low-income, rural youth living in California, with home computer ownership rates below 10%. It is also less likely that teens own their own cell phones in these areas (Arres, 2008).

Examples of Social Media Use for Improving Adolescent Health Outcomes

While there are few social media programs that have been evaluated, there are many examples of public health programs that have developed new applications to improve adolescent health.

California

HOOKUP is the first statewide text-messaging service of its kind that provides basic facts about reproductive health and relationships, as well as referrals to youth-oriented clinical medical services throughout California. Youth text "HOOKUP" to a short phone number and receive weekly health messages developed by health educators based on issues identified by California youth. Since its launch in 2009, it has over 3,044 subscribers and approximately 30% requesting clinic referral information.

Hookup is an excellent model of a low-cost program using health communication and mobile technology to facilitate youth access to sexual and reproductive health information and services. http://teensource.org/pages/hookup http://www.cfhc.org/Resources/cfhcwebsites.htm

Teensource is a website run by California Family Health Council as a resource for teens and young adults seeking information on healthy and responsible sexual lifestyles. Teensource also has a YouTube Channel for their videos on a variety of themes. Videos range from testimonials by teens and celebrities regarding life goals to thoughts about pregnancy, including videos in Spanish. "Are you getting it?" is a video series written and performed by high school students in Hollywood. The YouTube channel also contains promotional videos for their semi-annual condom contest. http://www.teensource.org

Mobile Action Lab is a program of Youth Radio. Based in Oakland, California, Mobile Action Lab provides 14-24 year olds training to develop web and computer-based applications that serve real needs in the community, such as finding free food distribution, information about youth and police relations, and other resources. http://www.youthradio.org/mobileapplab

National

Some innovative campaigns by non-profit and government groups use social networking websites to create a network of teens who can spread the word to their peers about risky behaviors and positive choices, while others create websites that allow teens to upload their own photos or videos to create their own positive message ads (Donahue, 2008).

That's Not Cool is a national public education campaign to prevent adolescent relationship abuse. That's Not Cool uses digital examples of controlling online and cell phone behaviors to encourage teens to prevent relationship abuse. The website, created by Futures Without Violence and the Ad Council, generates nearly 70,000 website visitors each month with tens of thousands of those teens sending That's Not Cool Callout Cards (e-cards with a message) to their friends and relationship partners. www.Thatsnotcool.com

Itgetsbetter.org is a website where gay, lesbian, bisexual and transgendered teens can find videos of other youth and individuals with encouraging messages about making it through the difficult teen years especially when faced with harassment and bullying. The project has turned into a worldwide movement, inspiring over 10,000 user-created videos viewed over 35 million times. www.ItGetsBetter.org

TUNE is a unique and interactive health and wellness program that helps teens make positive choices and live healthier lives through music. TUNE uses many ways to promote its music and messages including the TUNE website, Twitter, Facebook and YouTube which feature over 300 artist recordings. Teens can download and share the music with others and view videos of artists on YouTube. The site was developed by the Nebraska Health and Human Services Agency. www.tunemylife.org

Recommendations

For Parents and Caregivers:

Awareness Parents and caregivers need to educate themselves about social media and the ways their teens may use it, as well as the common risks, to help them understand and navigate the technologies.

Engagement Family discussions are positive for teens and can result in less risky online behaviors—more of those teens who said their parents have talked to them "a lot" reported: (Cox, 2007)

- Greater concerns about online safety and sharing of personal information and photos,
- More limited sharing of information/pictures via the internet,
- Lower incidence of public online profiles, and
- Lower incidence of talking or meeting people they only know from online.

Respect for privacy and empowerment For parents and caregivers, discussing media content with their teens can be an effective strategy to reduce the amount of personal information disclosed—more so than prohibiting access, as teens often perceive monitoring as a violation of their privacy (Ito, 2008). Teens are more receptive to user empowered strategies or even some form of industry protections.

For Community:

Greater resources need to be allocated to schools, libraries and community organizations to assist them in adopting risk management strategies and to provide education about online safety issues.

Resources are needed for social services and mental health professionals who work with minors and their families to extend their expertise to online spaces and work with other members of the community to identify at-risk youth and intervene before risky behavior results in negative outcomes (Beckman, 2008).

Technological solutions Internet providers such as Google and Yahoo, and social networking sites, such as Facebook and YouTube, need to continue to work with parents and policy makers to create awareness and opportunities for privacy protection of youth and to develop technologies that can assist teens in staying safe.

Health providers Medical and mental health providers need to include routine screenings to assess risk for depression that consider a teen's social media use. For example, assessing the amount of time spent using media including online activities or inquiring about online contacts (close friends vs. strangers, teen's willingness to meet someone offline, incidence of being harassed, harassing others). Tools should be developed to help providers engage in these conversations.

Schools need to update media literacy guidelines to include explicit information on successful participation with new media forms, online risks, and education about consequences of their

media use, including laws that pertain to them.

Non profits need to maximize the opportunity to reach teens through social networking that teens are already using (e.g. social networking sites, video and gaming sites, and blogs) to share their own content.

Research Evaluation research is needed on the success of social media-based interventions, particularly those focusing on urban and rural teens from low income families and those with poor home environments.

Conclusion

Social media forms have altered how youth socialize and learn, and raise a new set of issues for educators, parents, researchers and policymakers to consider. Adults can help teens think about online presence in moral and ethical ways—specifically to help teens in understanding the consequences for themselves and others of participation in the socially networked world. A multipronged approach that utilizes multiple social media platforms, as well as in-person contact, has the potential to reach teens with accurate health information, resources, and support.

Resources for Teens:

ThatsNotCool.com ItGetsBetter.org TeenSource.org WebWiseKids.org

Resources for Parents:

CommonSenseMedia.org Safekids.org Enough.org StopCyberbullying.org SafetyNet.aap.org

Resources for Agencies Working with Teens:

California Adolescent Health Collaborative provides up-to-date resources and research for professionals working with teens. CaliforniaTeenHealth.org

CDC Social Media Toolkit provides ideas about using social media for health promotion, including planning and implementing educational campaigns. This source includes a chart to help choose appropriate types of social media format and resources. http://www.cdc.gov/healthcommunication/ToolsTemplates/Soc ialMediaToolkit_BM.pdf

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References

Arres, A.M. (2008). In Search of Digital Equity: Assessing the geography of the digital divide in California. Retrieved on May 30, 2011 from http://www.scribd.com/doc/11233703/In-Search-of-Digital-Equity.

Berkman Center for Internet and Society, Harvard Law School, Internet Safety Technical Task Force. (2008). Enhancing Safety and Online Technologies: Final Report of the Internet Safety Task Force to the Multi-State Working Group on Social Networking for the State Attorneys General of the United States. Retrieved on May 30, 2011 from website: http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/ISTTF_Final_Report.pdf

Blumenfeld, W.J. and Cooper, R.M. (2010). LGBT and Allied Youth Responses to Cyberbullying: Policy Implications. *The International Journal of Critical Pedagogy*, 3(1), 114-133. Retrieved on June 3, 2011 from http://freireproject.org/images/2321/IJCPv3_7.pdf

Boyar, R., Levine, D., & Zensius, N. (2011). *Tech SexUSA: Youth Sexuality and Reproductive Health in the Digital Age.* Retrieved on May 30, 2011 from ISIS website: http://www.isis-inc.org/ISISpaper_techsx_usa.pdf

California Health Interview Survey (CHIS). (2005). Retrieved on May 30, 2011 from website: http://www.chis.ucla.edu

California Health Interview Survey (CHIS). (2001). Retrieved on May 30, 2011 from website: http://www.chis.ucla.edu

Clifford, S. (2009, February 7). Straight talk on digital harassment for teenagers. The New York Times. Retrieved on May 30, 2011 from

http://www.nytimes.com/2009/01/27/technology/27iht-adco.1.19705877.html

Collins, R.L., Martino, S.C., & Shaw, R. (2011). *Influence of New Media on Adolescent Sexual Health: Evidence and Opportunities, Working Paper* WR-761. Retrieved on June 3, 2011 from U. S. Department of Health and Human services website:

http://aspe.hhs.gov/hsp/11/adolescentsexualactivity/newmedialitrev/index.pdf

Cox Communications. (2007). Cox Communications Teen Internet Safety Survey, Wave II – in Partnership with the National Center for Missing & Exploited Children[®] (NCMEC) and John Walsh (Fielded Among Young People Aged 13-17). Retrieved from http://www.cox.com/takeCharge/includes/docs/survey_results_2007.ppt#271,1,Slide 1

Commonsense Media. (2010). Parent tip sheet: *Commonsense on Text Messaging*. Retrieved on May 30, 2011 from http://www.commonsensemedia.org/advice-for-parents/responsible-text-messaging-tips

Commonsense Media. (2009). Is Social Networking Changing Childhood? A National Poll. Retrieved on May 30, 2011 from:

http://www.commonsensemedia.org/sites/default/files/Social%20Networking%20Poll%20Summary%20Results.pdf

Donahue, E.H., Haskins, R. & Nightingale, M. (2008). Using the Media to Promote Adolescent Well-Being. Retrieved on May 30, 2011 from Princeton Brookings Institute website: http://www.brookings.edu/~/media/Files/rc/papers/2008/spring_children_haskins/spring_ children_haskins.pdf

Futures Without Violence (2011). Available at website: http://www.futureswithouviolence.org

Gross, E., Juvonen, J. & Gable, S. (2002). Internet Use and Well-being in Adolescence, *Journal of Social Issues*, 58)1), 75-90.

Hartup, W.W. (1996). The company they keep: Friendships and their developmental significance. *Child Development*, 67, 1-13.

Ito M., Horst, H., Bittani, M., boyd, d., Herr-Stephenson, B., Lange, P.G., . . . Tripp, L. (2008) Living and Learning With New Media: Summary of Findings From the Digital Youth Project. Chicago, IL: John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning. Retrieved on May 30, 2011 from MacArthur Foundation website: http://www.macfound.org/atf/cf/%7BB0386CE3-8B29-4162-8098-E466FB856794%7D/DML_ETHNOG_WHITEPAPER.PDF Kowalski, R.N. (2010). Alexis Pilkington Facebook Horror: Cyber bullies harass even after suicide. Retrieved on June 3, 2011 from website:

http://www.huffingtonpost.com/2010/03/24/alexis-pilkington-faceboo_n_512482.html

Lenhart A. (2007). *Cyberbullying*. Retrieved on June 3, 2011 from Pew Internet and American Life Project website; http://www.pewinternet.org/Reports/2007/Cyberbullying.aspx.

Lenhart A., Kahne J., Middaugh E., Macgill, A., Evans, C. & Vitak, J. (2008). *Teens, video games and civics*. Retrieved on June 3, 2011 from Pew Internet and American Life Project website: http://pewinternet.org/PPF/r/263/report_display.aspx

Lenhart, A., Ling, R., Campbell, S., & Purcell, K. (2010). *Teens & mobile phones*. Retrieved May 30, 2011 from Pew Internet & American Life Project website:

http://www.pewinternet.org/Reports/2010/Teens-and-Mobile-Phones.aspx

Lenhart A, Purcell K, Smith A., & Zickuhr K. (2010). *Social media & mobile internet use among teens and young adults*. Retrieved May 30, 2011 from Pew Internet & American Life Project website: http://www.pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx

Liz Claiborne, Inc. (2008). Tween and Teen Dating Violence and Abuse Study. Retrieved on May 30, 2011 from website:

http://loveisnotabuse.com/c/document_library/get_file?p_l_id=45693&folderId=72612&nam e=DLFE-203.pdf

McAfee, Inc. (2010). The secret life of online teens. Retrieved on May 30, 2011 from website: http://us.mcafee.com/en-us/local/docs/lives_of_teens.pdf

McKenna, K.Y.A. & Bargh, J.A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review, 4, 57-75.*

Mitchell, K. J., Ybarra, M. & Finkelhor, D. (2007). The Relative Importance of Online

Victimization in Understanding Depression, Delinquency, and Substance Use. *Child Maltreatment*, 12(4), 314–324.

Sex and Tech: Results of a Survey of Teens and Young Adults. Washington, DC: Retrieved from National Campaign to Prevent Teen and Unplanned Pregnancy website: http://www.thenationalcampaign.org/sextech/pdf/sextech_summary.pdf

The Nielsen Company. (2009). *How Teens Use Media*: A Nielsen report on the myths and realities of teen media trends. Retrieved on May 30, 2011 from website: http://www.nielsen.com/content/corporate/us/en/search.html?q=How+Teens+Use+Media

Noll, J., Schenk, C.E., Barnes, J.E., & Putnam, F.W. (2009). Childhood abuse, avatar choices, and other risk factors associated with internet-initiated victimization of adolescent girls. *Pediatrics*, 123(6), 1078-83.

Palfrey, J., Gasser, U., & boyd, d. (2010). Response to FCC Notice of Inquiry 09-94

"Empowering Parents and Protecting Children in an Evolving Media Landscape." Retrieved on May 30, 2011 from website:

http://cyber.law.harvard.edu/publications/2010/Re_Empowering_Parents_Protecting_Children

Purcell, K. (2011). *Trends in Teen Communication and Social Media Use*. Retrieved May 30, 2011 from Pew Internet & American Life Project website:

http://www.pewinternet.org/Presentations/2011/Feb/PIP-Girl-Scout-Webinar.aspx

Rideout, V.J., Foehr, U.G., & Roberts, D.F. (2010). *Generation M2: Media in the lives of 8-18 year olds*. Retrieved on May 15, 2011 from Kaiser Family Foundation website: http://www.kff.org/entmedia/upload/8010.pdf

Wolak, J. Mitchell, K., Finkelhor D. (2006). Online Victimization of Youth, Five Years Later. Retrieved on June 3, 2011 from website:

http://www.missingkids.com/en_US/publications/NC167.pdf

Ybarra, M.L, Espelage, D.L, & Mitchell, K.J. (2007). The co-occurrence of Internet harassment

and unwanted sexual solicitation victimization and perpetration: Associations with psychosocial indicators. *J Adolesc Health.* 41(S6), 31–41.

Ybarra, M. L., & Mitchell, K. J. (2004). Youth engaging in online harassment: Association with caregiver-child relationships, Internet use and personal characteristics. *Journal of Adolescence*, 27(3), 319-336.

Youn, S. (2009). Determinants of Online Privacy Concern and Its Influence on Privacy Protection Behaviors Among Young Adolescents. *The Journal of Consumer Affairs*, *43*(3), 389 418.



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