

## Growth and change in undercover online child exploitation investigations, 2000–2006

Kimberly J. Mitchell<sup>a\*</sup>, David Finkelhor<sup>b</sup>, Lisa M. Jones<sup>a</sup> and Janis Wolak<sup>a</sup>

<sup>a</sup>*Crimes Against Children Research Center, University of New Hampshire, 10 West Edge Drive, Durham, NH 03824, USA;* <sup>b</sup>*Crimes Against Children Research Center, University of New Hampshire, 126 Horton Social Science Center, Durham, NH 03824, USA*

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This paper documents changes in the rates and characteristics of undercover police investigations against child sexual exploiters on the Internet. Telephone interviews were conducted with law enforcement officials about a nationally representative sample of cases ending in arrest for an Internet-related sex crime against a minor in 2000 and 2006. The survey found a 280% increase in arrests of offenders identified in undercover operations between the two time periods. This translates to an increase in estimated numbers of arrests nationwide from 826 to 3137. Federally funded Internet Crimes Against Children Task Forces showed the largest increase in arrests by 988%. The growth in arrests suggests the successful adaptation of new technology and training to improve police effectiveness.

**Keywords:** Internet; sex crimes; undercover investigations; policing

Since the mid-1990s developing technologies have posed challenges for law enforcement requiring them to confront situations not anticipated in criminal statutes, master technical advances, develop new investigative techniques and handle criminal cases that often span multiple jurisdictions. To assist, legislators have acted on a number of fronts creating new statutes that encompass Internet offences, stiffening penalties and creating a national clearinghouse for reports of Internet-related crimes against children and the CyberTipline operated by the National Center for Missing & Exploited Children.

At the same time, law enforcement has mobilised to combat Internet Crimes Against Children (ICAC), including the development of task forces to identify, investigate and prosecute online offenders, as well as conduct undercover investigations. Over the past decade, the number of agencies funded to pursue online child sexual exploitation crimes has increased, as has the number of trained law enforcement investigators. Between 2000 and 2009, the ICAC Regional Task Forces network funded by the US Department of Justice grew from 30 to 61, representing almost 3000 affiliated federal, state and local law enforcement and prosecutorial agencies. By 2007, the ICAC Task Forces were present in all 50 states (Department of Justice 2007). Training programmes for investigating Internet-related child sexual exploitation crimes have been in place and growing since around 1999, so that increasing numbers of law enforcement personnel have been trained in investigating

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\*Corresponding author. Email: [Kimberly.Mitchell@unh.edu](mailto:Kimberly.Mitchell@unh.edu)

crimes by online offenders (Office of Juvenile Justice & Delinquency Prevention 2005). It is unclear, however, whether this rapid increase in an online law enforcement presence has resulted in more arrests.

### **Internet Crimes Against Children (ICAC) and undercover operations**

As Internet use has become widespread, questions have emerged about how often sexual offenders are using the Internet to commit crimes involving child sexual exploitation and child pornography. These types of Internet sex crimes against minors have caused concern among parents, law enforcement agencies, lawmakers, educators and other child advocates and become a factor in the debate over Internet regulation. Internet sex crimes against minors is comprised of a diverse range of offences including completed and attempted sexual assaults (Lanning 2001, Wolak *et al.* 2003, 2008); illegal use of the Internet to transmit sexual material to solicit minors (Lanning 2001, Wolak *et al.* 2003, 2008); the possession, distribution and production of child pornography (Lanning 2001, Quayle and Taylor 2002a, 2002b, Taylor and Quayle 2003, Wolak *et al.* 2003, 2008, Beech *et al.* 2008, Elliott and Beech 2009); and establishing and maintaining contact with other individuals having a sexual interest in children (Lanning 2001, Beech *et al.* 2008).

One investigative technique that the Internet has facilitated is the ability of law enforcement to impersonate minors in undercover investigations. This paper focuses on these investigations in which no minors are involved at any point but the suspects believe they are communicating with minors. If the offenders in these cases set-up meetings for sexual encounters or commit other acts that show they are intending to sexually assault or exploit a youth, they may be charged with attempted sex crimes or, depending on the circumstances and jurisdiction, other crimes including solicitation. Approximately 25% of the arrests for Internet sex crimes against minors in the one-year period beginning 1 July 2000 involved such undercover investigations on the Internet (Wolak *et al.* 2003). Thus, they make a significant contribution to overall arrests; more arrests than cases involving sex crimes against juvenile victims where the offender met an actual minor online (20% of such arrests). (Other arrests captured by the study included Internet-related sex crimes committed by family and acquaintances of the victim (19%) and arrests for child pornography possession (36%.) Anonymity is a unique aspect of the Internet (Cooper 1998) that may help potential offenders' ability to commit sex crimes against minors. A 40-year-old man who would not be appealing to a teenage girl crossing his path at the mall can create an online persona that will make him seem to be the perfect boyfriend for a 14-year-old girl he meets in a chat room. This same anonymity is advantageous to law enforcement because it allows an investigator to go online posing as a 14-year-old girl. This permits law enforcement to be proactive in investigations in ways they previously could not and it allows them to detect some offenders before they victimise an actual child.

However, since the year 2000 there have been substantial changes in computer and Internet technology, growth in the population of Internet users, increases in the number of law enforcement agencies with expertise in Internet sex crimes and increases in the numbers of investigators trained to conduct such investigations. These factors could impact the characteristics of the offenders, the dynamics of the crimes and the criminal justice response. To understand how these changes may be

impacting undercover arrests, we aim to address the following questions: (1) Have rates of arrests using undercover operations changed over time? (2) Are certain types of agencies (e.g. ICAC Task Forces, federal and local) playing a larger role in online undercover arrests? (3) Has the nature of the case itself changed over time? (4) Are offenders arrested in undercover operations different today than they were five years ago? (5) Have successful case outcomes continued over time?

## Methods

### *Sample*

The National Juvenile Online Victimization (N-JOV) Study collected information from a national sample of law enforcement agencies about the characteristics of Internet sex crimes against minors and the numbers of arrests for these crimes during a discrete one-year period (first in 2000–2001, then again in 2006). Law enforcement investigators were interviewed because investigators have been in the forefront of identifying and combating these crimes and are the best sources of accessible, in-depth information about their nature. A focus was placed on cases that ended in arrests rather than crime reports or open investigations because cases ending in arrests were more likely to involve actual crimes; had more complete information about the crimes, offenders and victims; gave a clear standard for counting cases; and helped avoid interviewing multiple agencies about the same case. All procedures were conducted under the guidance and approval of the University of New Hampshire Institution Review Board.

### *Wave 1*

In Wave 1 (2000–2001), a national sample of 2574 state, county and local law enforcement agencies was surveyed by mail asking them if they had made arrests in Internet-related child pornography or sexual exploitation cases. Then detailed telephone interviews were conducted with investigators who had such cases. The methodology was modelled after that used in the *Second National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children (NISMA-2)* to survey law enforcement agencies about child abduction cases (Sedlak *et al.* 2002).

Eighty-eight per cent of the eligible agencies ( $n = 2205$ ) responded to the mail surveys. Fifteen per cent of the agencies ( $n = 383$ ) plus two federal agencies that responded electronically reported 1723 arrests. Of the 1723 cases reported by law enforcement, 16% ( $n = 281$ ) were ineligible, typically, because the arrest did not occur in the timeframe of the study and 37% ( $n = 646$ ) were not selected for the sample. Cases were randomly sampled within agencies when four or more cases were provided. The purpose of sampling cases was to reduce the burden on the investigators. This resulted in 796 eligible cases; of these, 79% ( $n = 630$ ) of the telephone interviews were completed by six trained interviewers between October 2001 and July 2002. Of those not completed, 13% involved investigators that did not respond to requests for interviews, 3% involved respondents who refused to be interviewed and 5% involved duplicate cases or cases that could not be identified. A total of 18 completed interviews were duplicate cases and thus dropped from the data-set, resulting in 612 completed interviews.

## Wave 2

In Wave 2 (2006), we approached the same agencies as in Wave 1 plus an additional 28 agencies that were known to or had special missions to investigate these types of crimes. This resulted in a national sample of 2598 state, county and local law enforcement agencies surveyed by mail in Wave 2; asking them if they had made arrests in Internet-related child pornography or sexual exploitation cases. Again, detailed telephone interviews were conducted with investigators who had such cases.

Eighty-seven per cent of the eligible agencies ( $n = 2028$ ) responded to the mail surveys. Twenty per cent of the agencies ( $n = 458$ ) plus two federal agencies that responded electronically reported 3322 arrests. Of the 3322 cases reported by law enforcement, 8% ( $n = 276$ ) were ineligible and 42% ( $n = 1389$ ) were not selected for the sample. Cases were randomly sampled within agencies when four or more cases were provided. The purpose of sampling cases was to reduce the burden on the investigators. Of the 1657 eligible cases, 64% ( $n = 1063$ ) of the telephone interviews were completed by six trained interviewers between June 2007 and August 2008. Of those not completed, 27% involved investigators that did not respond to requests for interviews, 7% involved respondents who refused to be interviewed and 2% involved duplicate cases or cases that could not be identified. A total of 12 completed interviews were duplicate cases and thus dropped from the data-set, resulting in 1051 completed interviews. For a detailed breakdown of the Waves 1 and 2 mail survey, see our methodology report (available online at: [http://unh.edu/ccrc/pdf/Revised%20NJOV%20Methodology%20Rpt%2001\\_04\\_10.pdf](http://unh.edu/ccrc/pdf/Revised%20NJOV%20Methodology%20Rpt%2001_04_10.pdf)). See Figure 1 for a detailed dispositional of each sample.

### *Longitudinal disposition to the mail survey*

A total of 2258 agencies were eligible in both waves of the study. This included 72 first frame (ICAC Task Forces and other specialized agencies), 785 second frame (agencies with ICAC training) and 1401 third frame (all other agencies) agencies. Seventy-eight per cent of eligible agencies returned mail surveys in both Waves, 9% participated in Wave 2 only, 10% participated in Wave 1 only and 2% participated in neither (Table 1). Participation across frames was significantly different ( $X^2 = 28.96$  (6),  $p < 0.001$ ).

The population size the agency served was related to differing participation across frames. The average population served was highest for those agencies that participated in neither Waves ( $M = 261,746$ ,  $SD = 1,151,888$ ). This group significantly differed from all other groups. The mean population served for agencies participating in: (1) Wave 1 only = 75,740,  $SD = 225,968$ ; (2) Wave 2 only = 37,765,  $SD = 107,918$ ; and (3) both Waves 1 and 2 = 57,180,  $SD = 289,546$ ) ( $F = 6.95$ ,  $p < 0.001$ ). No other significant differences were identified in terms of size of population served among the remaining groups.

### *Procedures*

To be eligible, cases had to: (1) have victims younger than 18; (2) involve arrests between 1 July 2000 and 30 June 2001 (for Wave 1) and in the year 2006 (for Wave 2); and (3) be Internet-related. Cases were Internet-related if any of the following criteria were met: (1) an offender–victim relationship was initiated online; (2) an offender who

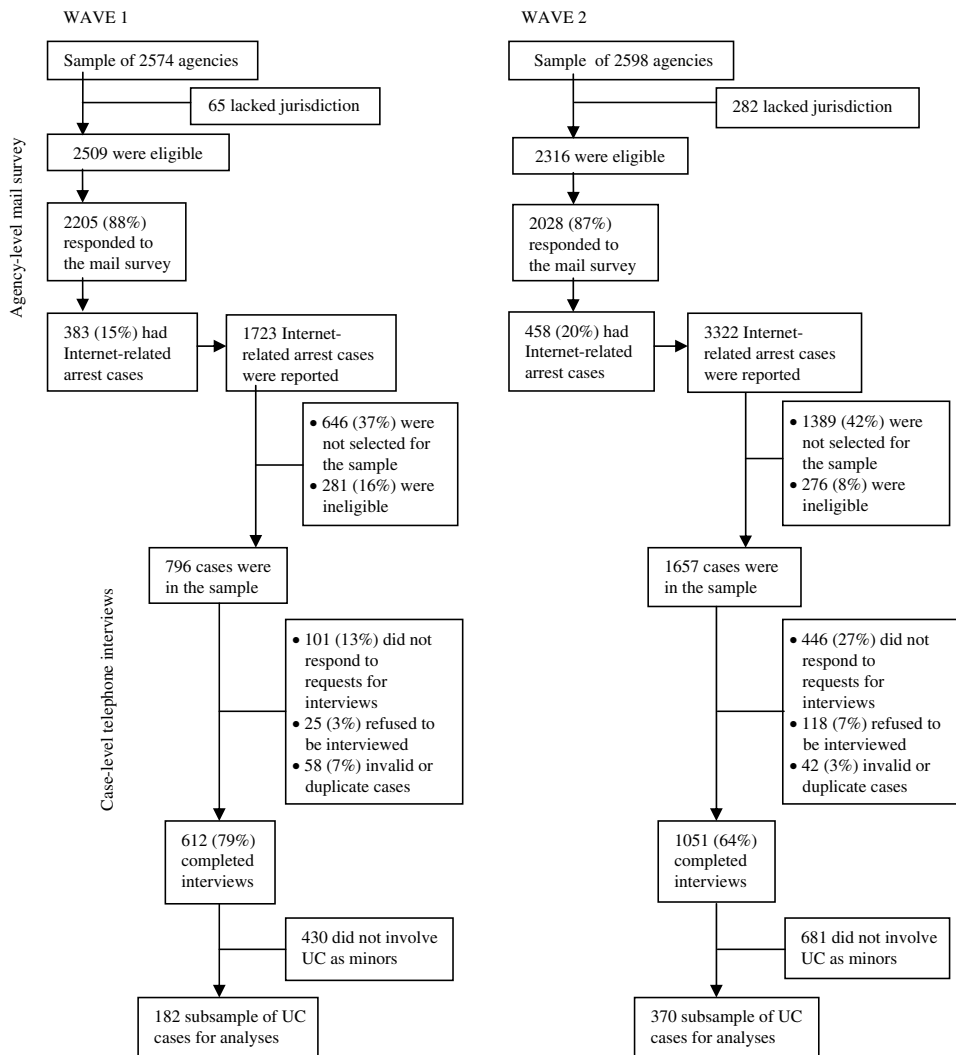


Figure 1. Disposition of agency and case-level samples.

was a family member or acquaintance of a victim used the Internet to communicate with a victim to further a sexual victimisation, or otherwise exploit the victim; (3) a case involved an Internet-related proactive investigation; (4) child pornography was received or distributed online, or arrangements for receiving or distributing were made online; or (5) child pornography was found on a computer, on removable media such as floppy disks and compact disks, as computer printouts, or in a digital format.

We designed a sampling procedure for case-specific interviews that took into account the number of cases reported by an agency, so we would not unduly burden respondents in agencies with many cases. If an agency reported between one and three Internet-related cases, we conducted follow-up interviews for every case. For agencies that reported more than three cases, we conducted interviews for all cases that involved identified victims and sampled other cases. (The term 'identified' victim

Table 1. Disposition of mail surveys between Wave 1 and Wave 2.

	Agencies eligible in both Waves	Returned in Wave 2 only	Returned in Wave 1 only	Returned in both	Returned in neither
First frame	72	7 (10%)	12 (17%)	49 (68%)	4 (5%)
Second frame	785	45 (6%)	91 (11%)	638 (81%)	11 (1%)
Third frame	1401	144 (10%)	121 (9%)	1096 (78%)	40 (3%)
Total	2258	196 (9%)	224 (10%)	1783 (79%)	55 (2%)

denotes victims that were identified and contacted by law enforcement in the course of the investigation.) For agencies with between 4 and 15 cases, approximately half of the cases that did not have identified victims were randomly selected for follow-up interviews. In agencies that reported more than 15 cases, approximately one-quarter of the cases with no identified victims were randomly selected. In some agencies, we could not find out which cases had identified victims, so we sampled from all cases, using the sampling procedure described above.

### *Weighting procedures and prevalence estimates*

A statistical technique called ‘weighting’ was used to estimate annual numbers of arrests involving Internet sex crimes against minors in a one-year time frame within the USA. Weighting takes into account sampling procedures and non-response, allowing use of the data to project estimated annual arrest totals with 95% confidence that the accurate number will fall within a specific range.

Agency- and case-level weights were calculated to produce estimates of annual arrests involving Internet sex crimes against minors within the USA. Data weighting takes unequal selection probabilities and non-response into account and allows for unbiased estimation with measurable imprecision. Four variables were constructed to reflect the complex sample design. First, each case was given a weight to account for its probability of selection to both the mail survey and telephone interview samples. The weights were adjusted for agency non-response, case-level non-response, duplication of cases among agencies and arrests by one federal agency that did not participate in case-level interviews. Second, a primary sampling unit (PSU) ID was created to account for the clustering of cases. Third, a stratum variable was created in order to reflect the sampling frame from which the agency or case was selected. Finally, overall probabilities of selection were provided in order to calculate finite population correction factors which accounted for the sample being selected without replacement.

### *Measures and analyses*

Variables were based on questions developed for the N-JOV Study through interviews, pretesting and piloting with law enforcement before Wave 1 data collection began. Questions covered offender characteristics, characteristics of the undercover operation, how cases came to the attention of law enforcement, other offences committed and case outcomes.

All analyses were conducted using Stata Version 11.0 (StataCorp. 2009) survey design procedures. All variables were cross-tabulated with Pearson chi-square statistics used to determine significance. All cases that involved a proactive undercover operation where the undercover agent was posing as a minor were included in the current analyses (unweighted  $n = 182$  in Wave 1, unweighted  $n = 370$  in Wave 2).

## Results

### *Trends in online undercover arrests*

In 2006, law enforcement made an estimated 3137 arrests (95% CI: 2352–3921) for crimes involving solicitations to undercover investigators posing online as minors, compared to an estimated 826 such arrests (95% CI: 505–1146) in 2000; an increase of 280% (Figure 2). The largest percentage increase in number of arrests was made by ICAC and affiliate agencies – 988% increase from 159 arrests in 2000 to 1730 in 2006. Arrests made by state, county and local law enforcement agencies increased by 152% – from 481 in 2000 to 1211 in 2006. The smallest percentage increase (4%) was seen in federal agencies, from 187 in 2000 to 195 in 2006.

### *Are offenders arrested in undercover operations different from 5 years ago?*

The 2006 offender profiles had some basic similarities to the profiles found in the 2000 arrests (Table 2). As was the case in 2000, virtually all offenders in 2006 were male, the majority was non-Hispanic White and about half had graduated high school or had some college education. In 2006, however, a significantly greater percentage of offenders were younger with 33% being age 25 or younger compared with 7% in 2000 ( $p < 0.001$ ). Likely related to the age difference, more offenders in 2006 were also single, never married ( $p < 0.01$ ); less likely to be employed full-time ( $p < 0.001$ ); and lived in households with slightly less annual income ( $p < 0.05$ ). Offenders in 2006 were more likely to live in urban communities than in 2000 ( $p < 0.001$ ). In 2006, offenders were less likely to have lived with a minor at the time of the crime ( $p < 0.001$ ), possess child pornography ( $p < 0.001$ ) and in fewer cases a child victim was identified during the

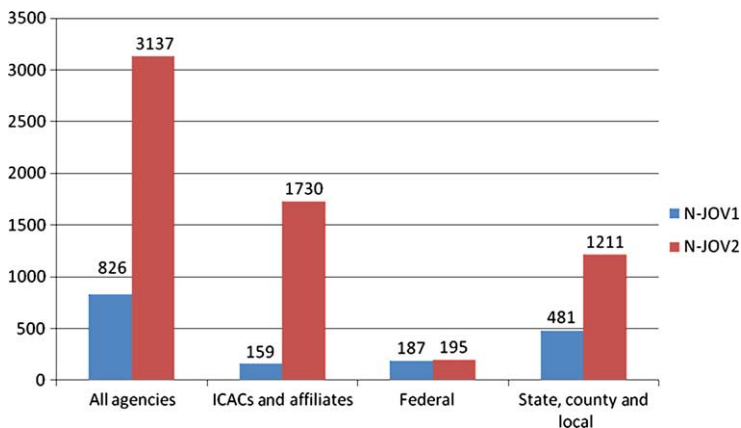


Figure 2. Estimated number of arrests for crimes that involved an undercover solicitation to law enforcement posing as a minor by agency type.

Table 2. Demographic characteristics of offenders arrested in proactive investigations in 2000 and 2006 (unweighted  $n = 552$ ).

Characteristic	Offenders arrested in 2000 ( $n = 182$ ), %	Offenders arrested in 2006 ( $n = 370$ ), %	$X^2$
Gender			
Male	100	100	0.0008
Female	<1	<1	
Age			
Younger than 18	0	<1	32.01***
18–25	7	33	
26–39	57	38	
40 or older	35	28	
Race/ethnicity			
Non-Hispanic White	91	85	4.29
Hispanic White	5	6	
Non-Hispanic Black	2	4	
Asian	2	2	
Other	0	2	
Annual household income			
Less than US\$20,000	6	15	11.49*
US\$20,000–US\$50,000	44	37	
More than US\$50,000–US\$80,000	24	16	
More than US\$80,000	10	12	
Don't know	15	20	
Highest level of education			
Did not finish high school	1	4	13.77
High school graduate	35	32	
Some college	19	20	
College graduate	23	15	
Postgraduate degree	5	2	
Community of residence			
Urban	13	27	19.11***
Suburban	41	40	
Large town	16	11	
Small town	25	13	
Rural	4	9	
Marital status			
Single, never married	35	54	18.01**
Married	35	23	
Living with a partner	4	6	
Separated, divorced, widowed	26	15	
Employed full-time	90	71	17.78***

\* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$ .

investigation of the crime ( $p < 0.001$ ) (Table 3). Offenders in 2006 were slightly more likely to have a job that provided them with access to a minor ( $p < 0.05$ ). Given the likelihood that some of these significant bivariate relationships were a factor of the differences in offender age, we also conducted these comparisons while adjusting for offender age (not shown) and the significant differences remained. No differences were identified in terms of offender production of child pornography, known violent



behaviour, problems with drugs or alcohol, prior arrest for non-sexual offence and prior arrest for sexual offence against a minor.

### *Nature and characteristics of undercover operations over time*

A number of changes had occurred by 2006 in how undercover investigations were conducted (Table 4). In 2006, undercover agents were less likely to portray boys online (7% vs. 24% in 2000,  $p < 0.001$ ). More first meetings with offenders occurred in chat rooms in 2006 (82% vs. 54%,  $p < 0.001$ ). Among those meetings that did occur in chat rooms, the topic was less likely to be sexually focused in 2006 (23% vs. 77% in 2000,  $p < 0.001$ ). Also in 2006, the number of online interactions with the offenders was fewer; 72% of cases involved 10 interactions or less compared with 48% in 2000 ( $p < 0.001$ ). All offenders in 2006 brought sex-related items to the actual in-person meeting with the undercover agent, compared to 59% in 2000 ( $p < 0.001$ ). Other characteristics of these cases were similar in both 2000 and 2006: the age of the minor being portrayed was typically 14 years old; most undercover agents and offenders communicated online for one month or less; and in-person meetings took place in over one-quarter of cases. Additionally, offender deception continued to play a part in only a minority of cases; age deception was the most common, accounting for approximately one-quarter of all cases.

Table 3. Characteristics of offenders arrested in proactive investigations over time (unweighted  $n = 552$ ).

Characteristic	Offenders arrested in 2000 ( $n = 182$ ), %	Offenders arrested in 2006 ( $n = 370$ ), %	$\chi^2$
Access to children			
Lived with minor at time of crime	31	15	15.82**
Job provided offender with access to youth	7	13	3.13*
Social interaction and behaviour			
Possession of child pornography	48	18	45.24**
Production of child pornography	3	3	0.10
Any victim in current crime	17	6	15.78**
Known violent behaviour	4	4	0.003
Problems with drugs or alcohol	16	14	0.30
Prior evidence of criminal behaviour			
Prior arrest for nonsexual offence	15	20	1.14
Prior arrest for sexual offence against minor	4	4	0.04

\* $p \leq 0.05$ ; \*\* $p \leq 0.001$ .

Table 4. Case characteristics of proactive investigations over time (unweighted  $n = 552$ ).

Case characteristic	2000 case ( $n = 182$ ), %	2006 case ( $n = 370$ ), %	$\chi^2$
Age portrayed			
Less than 12	3	0	13.00
12–13	29	36	
14	47	48	
15–17	21	16	
Gender portrayed			
Male	24	7	27.36**
Female	76	93	
First meeting online was in:			
Chat room	54	82	92.26**
Instant messaging	29	7	
E-mail	14	1	
Social networking site	0	4	
Online want ad	0	2	
Other	3	2	
Chat room was sexually oriented	77	23	84.87**
Length of time communicated online			
One month or less	57	64	1.64
More than 1–6 months	35	30	
More than 6 months	7	6	
Number of online interactions			
10 or less	48	72	26.67**
11–30	43	20	
31–100	8	7	
More than 100	2	1	
In person meeting took place	78	77	0.09
Offender brought sex-related items to meeting	59	100	83.65**
Offender deception			
Age	27	26	0.010
Physical appearance	7	6	0.44
Identity (e.g. employment or residence)	6	12	2.79*
Sexual motives	2	2	0.20
Something else	5	4	0.27

\* $p \leq 0.05$ ; \*\* $p \leq 0.001$ .

### Case outcomes

More similarities than differences were identified in terms of case outcomes between 2000 and 2006 (Table 5). Most offenders pled guilty; 87% in 2000 and 91% in 2006. Of those that went to trial, there were more acquittals in 2006 ( $p < 0.05$ ), although this only represents a minority of cases overall (10% in 2000 and 3% in 2006). Regarding the sentencing itself, 59% of offenders in both studies received some incarceration; more offenders in 2006 received a suspended or deferred sentence ( $p < 0.001$ ). There were fewer federal charges ( $p < 0.001$ ) and more state charges ( $p < 0.001$ ) filed against the offender in 2006. In both studies, the majority of offenders were required (or likely to be required) to register as a sex offender as a result of the current crime, approximately half were mandated to a treatment

programme for sex offenders and over half were prohibited from using the Internet (or limited or monitored use).

## Discussion

Arrests of offenders who solicited undercover investigators posing as minors at some point during the crime increased 280% between 2000 and 2006 – from an estimated 826 arrests in 2000 to 3137 in 2006. The largest increase in arrests (988%) was seen among the ICAC Task Forces, units specifically designed to investigate such crimes as well to provide assistance to smaller agencies that encounter such crimes in their jurisdictions. Such cases are also increasing, however, among non-specialised agencies – with a 152% increase in arrests by state, county and local agencies. Federal agencies appear to be taking a lesser role in the investigation and arrests for such crimes; perhaps due to reallocation of time and funds to other crimes like terrorism or other Internet crimes like child pornography possession and larger scale crime organisations (Federal Bureau of Investigation 2009, Wolak *et al.* in press). The increase in undercover cases is particularly striking when compared with rates of Internet crimes against youth with no undercover element during the same timeframe, such as those for online predation (about 20% increase) and

Table 5. Case outcomes for offenders arrested in proactive investigations over time (unweighted  $n = 552$ ).

Outcome	Offenders arrested in 2000 ( $n = 182$ ), %	Offenders arrested in 2006 ( $n = 370$ ), %	$\chi^2$
Outcome known	86 ( $n = 158$ )	74 ( $n = 276$ )	7.4*
Any federal charges	26	9	19.8***
Any state charges	79	93	16.4***
Any guilty plea (federal or state)	87	91	1.3
Any conviction	10	3	8.3**
Any dismissal	5	6	0.3
Sentence included incarceration	59 ( $n = 101$ )	59 ( $n = 176$ )	0.03
Short incarceration (one year or less)	25	26	0.03
Long incarceration (more than five years)	21	17	0.7
Sentence included probation	52	43	2.6
Sentence included a fine	5	13	6.3*
Sentence was suspended or deferred	3	18	16.9***
As a result of case offender will (is likely to) be:			
A registered sex offender	92	89	1.1
In a treatment program for sexual offenders	55	51	4.3
Not sure	37	32	
Prohibited from using the Internet or limited or monitored use	55	63	2.5
Not sure	30	24	

\* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$ .

Internet-related crimes committed by family members and acquaintance (about 80% increase) (Wolak *et al.* 2009).

While the increase in undercover cases could be interpreted as a sign that more offenders are trying to exploit children online, the trend could also be explained by the expansion of law enforcement resources dedicated to conducting such investigations. From 2000 to 2006, 15 additional ICAC Task Forces were funded; the previously funded Task Forces increased their training and regional cooperative activities; and the NBC Dateline programme 'To Catch a Predator' popularised and promoted the idea of sting operations to catch child exploiters. The growth in law enforcement undercover efforts might result in the identification or capture of a greater percentage of existing offenders and is not necessarily a sign that the pool of Internet offenders is expanding.

Our evaluation of law enforcement activity in these cases suggested that, both in 2000 and 2006, undercover investigations were being carried out mostly by specially trained officers in multi-agency operations, and that the arrests resulted in conviction rates as high or higher than other sex crime investigations (Mitchell *et al.* 2005). Indeed, the great majority of offenders in both studies pled guilty, emphasising the strength of evidence collected in Internet-based sex crimes. Indeed, it appears that crimes committed through the Internet provide law enforcement with particularly strong evidence in the form of recorded chat conversations and sexual images. This is very beneficial to child sexual exploitation cases, which have to rely substantially on child victim testimony (Lawson and Chaffin 1992, Pence and Wilson 1994, Walsh *et al.* 2008, Lippert *et al.* 2009).

### ***Undercover techniques evolved between 2000 and 2006***

The techniques for conducting undercover operations evolved somewhat from 2000 to 2006. The changes in technique likely were due to a combination of changes in technology, changing use of technology by offenders, law enforcements' increased familiarity with the technology, training, and increased expertise about the nature of Internet child sex offenders. One of the largest differences between undercover cases in 2000 and 2006 involved the gender of the minor being portrayed by undercover officers. In 2000, one in four proactive undercover investigations involved police posing as boys; this was true for approximately 1 in 20 cases in 2006. It is unclear why the use of boy decoys has waned. We have been unable to identify any formal policy or strategic argument that may have discouraged such investigations. The trend has likely resulted from the choices that large numbers of individual investigators made when they decided what kind of role was most likely to be effective and could be most easily impersonated. The greater vulnerability of girls to sexual exploitation may have been one decision-influencing factor. A potential discomfort in impersonating someone interested in a homosexual relationship may have been another. There also tends to be more heterosexual than homosexual offenders (B. Russ, personal communication, 2009). But it is not entirely clear why such factors had a stronger influence in 2006 compared to 2000.

A second large difference between 2000 and 2006 undercover cases was that more initial meetings between offenders and undercover investigators in 2006 occurred in chat rooms, although the chat rooms were less likely to be focused on sexually explicit content. Sexually explicit chat rooms include those that are specific to incest

and other clearly illegal and inappropriate topics. Chat rooms on general topics like love and romance are a draw for adolescents and therefore perhaps a more likely spot for offenders to approach youth and form relationships with them in an attempt to initiate a sexual relationship. However, given the rapidity with which technology changes, these data from 2006 may already be obsolete. Already, in 2009, social networking sites have been identified as one of the most popular places for youth to populate online (Lenhart 2009) and thus may play a larger role in more current undercover operations. Future research will be necessary to track trends in offender behaviour and successful undercover investigative strategies.

Finally, in the 2006 undercover cases, there were also fewer online interactions between the investigator and the offender than in 2000: 72% of cases involved 10 or fewer interactions in 2006 compared to 48% in 2000. This could be an indicator of increasing law enforcement skills and efficiency. Law enforcement techniques for conducting undercover investigations have likely been fine-tuned since the 2000 study, with faster and more successful procedures for gathering the necessary evidence to arrest and prosecute offenders. For example, undercover investigators posing as youth may more successfully convince offenders to bring sex-related items to meetings thereby helping to prove intent to follow through with the crime. Indeed, all offenders in 2006 brought sex-related items to meetings – up from 59% in 2000. Procedural changes in the way such investigations are conducted could also account for this difference (B. Russ, personal communication, 2009).

### ***Changes in the population of offenders arrested in undercover investigations***

Offenders arrested in undercover operations were once characterised as tending to be older, White males from a middle-class or higher socio-economic background (Lanning 2001, Mitchell *et al.* 2005). Offenders arrested in the 2006 undercover operations tended to be younger than those arrested in 2000. This may reflect a higher level of comfort by Generation Y, which has been raised on the Internet, to recruit romantic and sexual partners online. It may also represent an increased willingness of law enforcement to pursue investigations against younger and potentially less deviant exploiters, whose age difference with their victim is not so large. Finally, the arrest of younger offenders could also be an unfortunate sign that criminal activity in the form of sexual relationships with younger partners may be increasing in new generations of young adults. This change in the demographics of online offenders, a change which we found in other types of Internet sex crimes as well, merits additional study.

### ***Limitations***

Several limitations must be noted. First, our data pertain only to undercover cases that ended in arrest. Second, all of the data were gathered from law enforcement investigators. They could provide only limited data about offender behaviour and some of the information they provided could have been biased by training or professional attitudes. Third, these numbers are estimates based on the sample of cases that were the subject of interviews. Although the study was designed to yield a nationally representative sample of cases, sometimes samples are skewed. The margin of error could be larger than calculated. Fourth, keeping up with rapidly changing technology is a challenge for researchers. Aspects of Internet sex crimes may have

changed since our data were collected about 2006 arrests – for example, the emergence in popularity of social networking sites and peer-to-peer networks may have changed some of the dynamics of these cases.

Finally, it is important to remember that our estimates of arrests are not full measures of the number of crimes committed by online offenders or even the number of such crimes known to law enforcement. Many sex crimes against minors never come to the attention of law enforcement (Finkelhor and Ormrod 2000, Kilpatrick *et al.* 2003) and many of those known to law enforcement do not culminate in arrest (Finkelhor *et al.* 2005). However, these estimates do provide a means to gauge the growth of these crimes, their number relative to other sex crimes against minors and the extent of law enforcement activity only a few years after the emergence of online offenders as a public policy concern.

### **Implications**

Rapid changes in technology require ongoing training for law enforcement about ICAC and evolving best practices for conducting undercover investigations. To meet that standard, it is critical that law enforcement stay up to date on new research on Internet crimes and the changing characteristics of online offenders and their victims. Currently the ICAC Training & Technical Assistance Programme (<http://www.icactraining.org/>) predominantly trains agencies which specialise in conducting Internet crime investigations, like the Task Forces (B. Russ, personal communication, 2009). Given the increase in arrests by state, county and local agencies as well, a critical next step is in strategising the best techniques for providing training to a larger audience. Distance learning may be a cost effective and promising next step for training a larger range of agencies across the USA.

To further educate law enforcement, researchers should develop methods for rapidly disseminating findings in a manner accessible to law enforcement, prosecutors and others in the criminal justice system. Fact sheets and bulletins, for example, could be drafted quickly in order to disseminate new findings online and through law enforcement portals. As a result, law enforcement working in the field of online youth victimisation, such as ICAC Task Forces, would be able to more quickly integrate the new research data in training and community education efforts. Law enforcement would also be able to review data on changing technology in these crimes and new developments in offender demographics more quickly and use the findings to adapt investigation strategies.

Research findings here and elsewhere suggest that offenders arrested in undercover operations are a less deviant and dangerous group of offenders than those arrested in crimes involving real youth victims. Overall, Internet offenders, and particularly those caught in undercover ‘sting’ operations, are not generally as impulsive, aggressive or violent as non-Internet sex offenders or those who are known to have physically victimised children and youth (Delmonico *et al.* 2001, Delmonico and Griffin 2003, Mitchell *et al.* 2005). Furthermore, the widening net created by expanding undercover operations and resources appears to be pulling in greater numbers of less hardened and younger offenders. One implication of this is that law enforcement, informed by careful research, should ensure that expanding undercover operations are not increasing the likelihood of entrapment, cases in which individuals that might not otherwise have committed a crime against a youth

are enticed to do so (Bowden 2009). Nonetheless, the high rates of conviction in our data suggest that the offenders in the cases described here had every intention of meeting a minor for sex. Given that online operations may be capturing a greater number of new or emerging criminals, this research also suggests the need for more efforts to identify the most effective criminal justice sanctions and mental health treatments for this group. To increase safety of youth both online and offline, effective sanctions and treatment options are needed for online offenders who have been convicted of seeking sexual contact with minors. Given lower rates of criminal history, this group might be particularly amenable to treatment interventions.

## Conclusion

The growth in arrests suggests increasing law enforcement involvement on the Internet domain as well as the successful adaptation of new technology and training to improve police effectiveness. Juvenile victims are the population these offenders were targeting and, as such, these undercover investigations may do more to reduce and deter the population of online solicitors of juveniles than after-the-fact police activity by sometimes catching offenders before they have the chance to victimise youth.

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