

Legal Issues in Network Research: Determining Content in Web-Browsing Communications

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Determining “Content” in Internet Communications

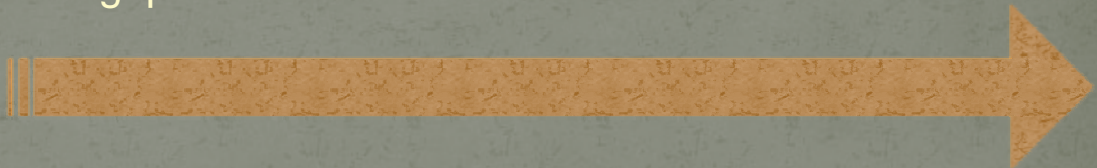
- Unresolved issue = legal status of Internet communications as “Content” / Non-content
 - Significance of classification: major factor in determining the privacy protection it is afforded (constitutional and statutory)
 - “Content” (generally) = information concerning the substance, purport or meaning of a communication
 - Not all Inet comms classification are grey: ECPA clearly defines and protects some, e.g., email body is content)
 - Most controversial: web-browsing information categories
- Internet Communications classifications (most relevant currently)
 - Web-browsing communications:
 - URL
 - URL + search terms / identifiable file names
 - IPA of website
 - Size of information accessed / downloaded
 - Website data sent to user by server, vice versa
 - Email:
 - Body, Subject line, To/From, Size, ISP Subscriber Information

Internet Communications Content Risk Framework

Inet Comm Classification	Current Legal Status		Exposure Direct	Exposure Indirect (Linkage)	Content Exposure Criteria		Content Exposure Risk Certainty
	Constitutional Law	ECPA			Supplemental Data Req'd	Quantity Exposed	
URL	? (likely content)	?	Content of webpage	Not needed	no	variable	high
URL + search term	? (likely content)	yes	Content + User's intentions	Not needed	no	variable	high
IPA website	? (likely <u>not</u> content)	?	Numbers. Maybe URL if unique to IPA	Couple w/ info that website small : reveal content	trivial	variable	Low-high
Size of Info Accessed or Downloaded	no	?	Numbers. Maybe URL if unique to IPA	Couple w/ info that files distinct sizes: content	trivial	variable	Low-high
Website data sent to user / by user	yes	yes	content	Not needed	no	variable	high
Email Body							
Email Subject							
Email To/From							
Email Size							
ISP Subscriber Info							

Determining “Content” Classification of Internet Communications

- Implications for researchers:
 - Legal applications and interpretations may be non-existent for certain Inet comms
 - Caselaw/regulation is unpredictable in time and substance
 - Legal applications and interpretations will change, not guaranteed to be consistent
 - Researchers looking for guidance *now*
- Possible Solution: principle-based determination of whether the communication is “content”
 - “Content-Revealing” Principle*
= content-revealing information must be treated as content
 - IOW: non-content data is afforded the same privacy protection as content if it reveals the subject or purpose of the communication
 - Assessing and applying to the gaps



**(principle enunciated in Tokson, Matthew “The Content:Envelope Distinction in Internet Surveillance Law” William and Mary L. Rev. Vol, 50:000 (2008))*

Determining “Content” Classification of Internet Communications

- **Content-Revealing Principle** value prop:
 - Way to assess privacy risk (by classifying content and non-content) amidst grey law
 - Steeped in principle rooted in analogous and better-developed areas of the law
 - Privilege law (att’y-client, doctor-patient)
e.g. mere fact that consultation occurred can reveal patient condition
 - Physical surveillance cases
e.g. Kyllo thermal measurement outside home (NC) revealed halide lights used to grow marijuana (content); nc → substance so deserve 4th A protection
 - Maps to Beneficence principle (minimize risk)
- Caution: not *automatically* guarantee level of constitutional or statutory protection ... but clearer classification will weigh heavily in determining privacy protection

Human Subjects Regulations Application to Network Research

**Ethical Issues in Network Research
Workshop**

May 27-28, 2009

Context

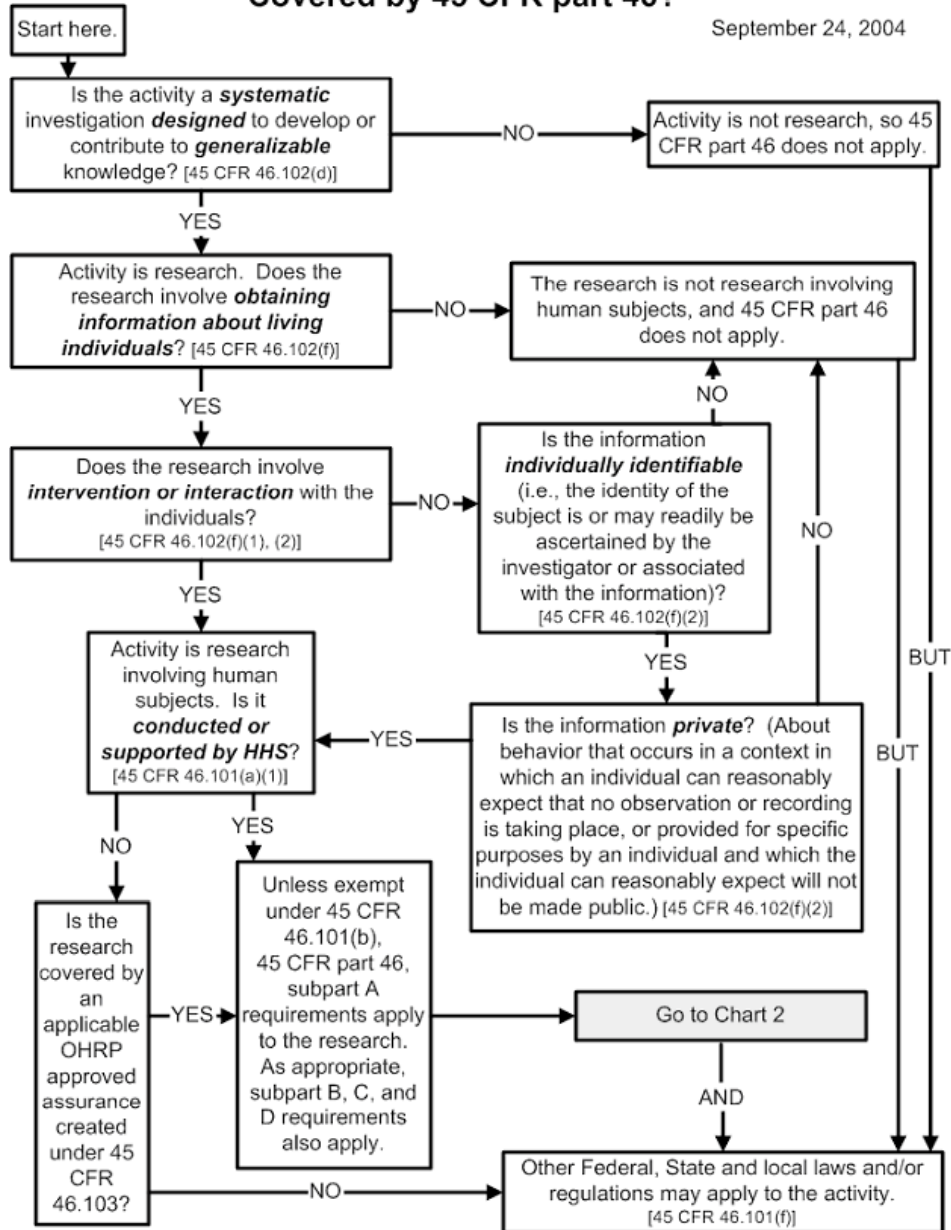
- The benefits of network traffic measurement and experimentation all derive from the value of network science empiricism. This includes a better understanding of the structure and functions of networks that comprise our critical infrastructure, such as Internet topology, traffic routing, workload prioritization, network performance, and cyber threats and vulnerabilities.
- Ethical and legal challenges inhibit access to network data or impede in vivo network experimentation for measurement and analysis, and generalize across familiar issue spaces such as cyber crime, computer systems security threats, and cyber infrastructure vulnerabilities. Effective balancing of network research utility and ethical obligations involves considering the following interests and stakeholders:
 - Network researchers pursuing scientific and intellectual freedom, and empirical knowledge that will inform business models and policies predicated on economics and usage patterns, security, and social behavior, etc.;
 - Data subjects and owners seeking the benefits of technology advancement without having to surrender control of personal information, or renounce liberties and freedom of movement in the cyber environment;
 - Network/platform owners exercising their rights in a capitalist economy to protect intellectual property, create wealth, and exercise their freedom to design and protect business and customer relationships; and,
 - Collective right of network and data owners to build and enhance the cyber networks within which norms, transactions and livelihoods are maturing.

Anchor Questions

- /1st/ Must the research be reviewed by an IRB
 - Is there an exception?
- /2nd/ Can the review be expedited
- /3rd/ Can informed consent / its documentation be waived

Chart 1: Is an Activity Research Involving Human Subjects Covered by 45 CFR part 46?

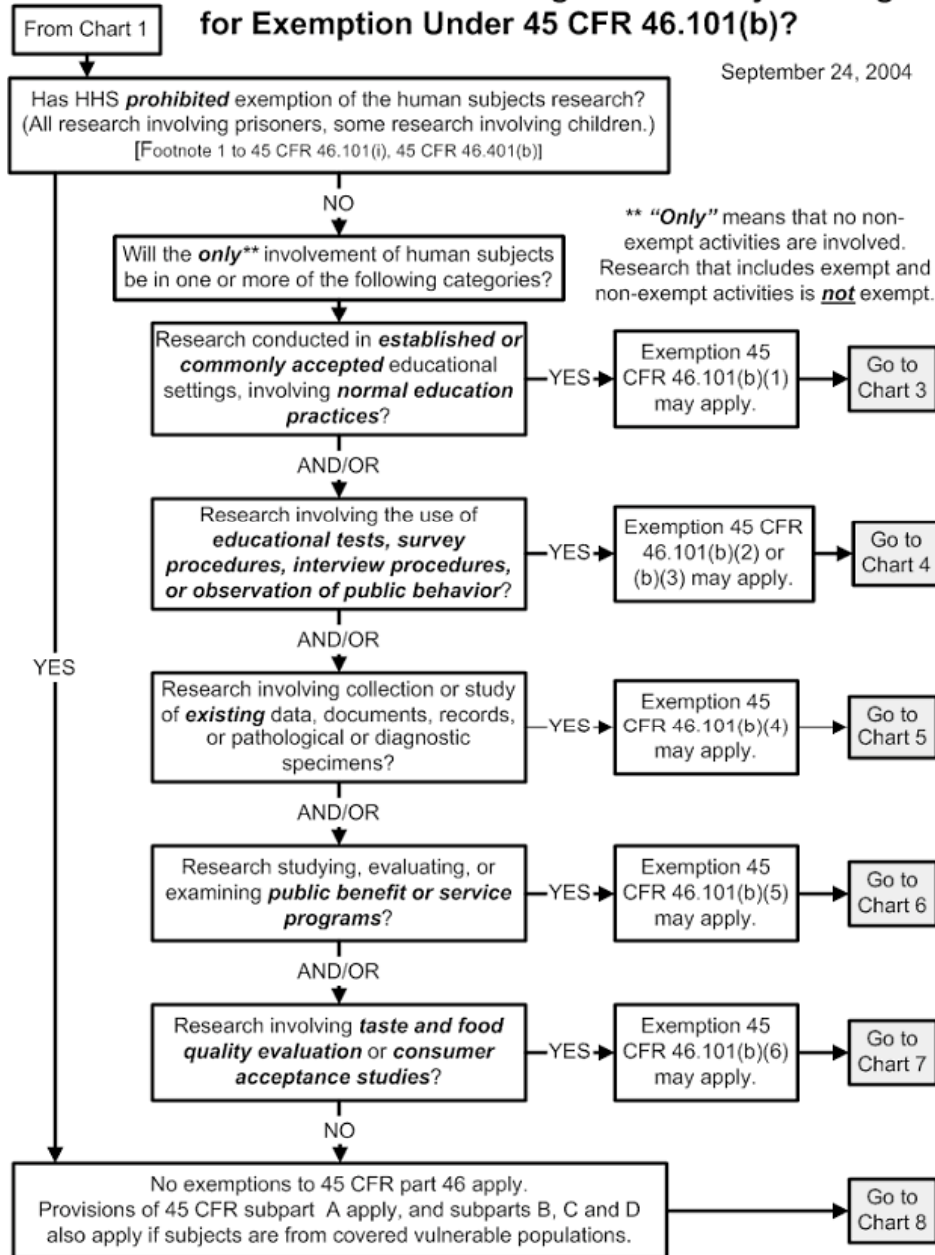
September 24, 2004



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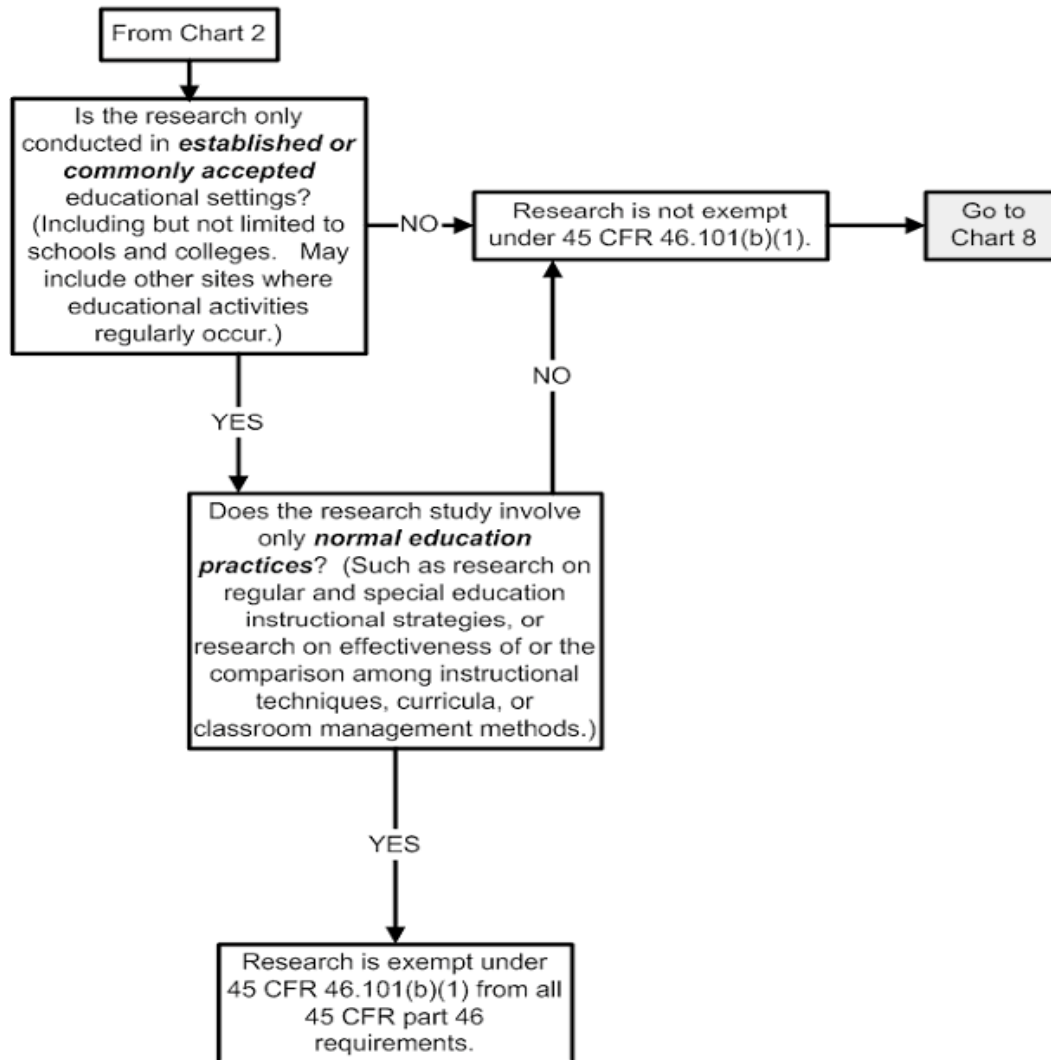
Chart 2: Is the Research Involving Human Subjects Eligible for Exemption Under 45 CFR 46.101(b)?

September 24, 2004

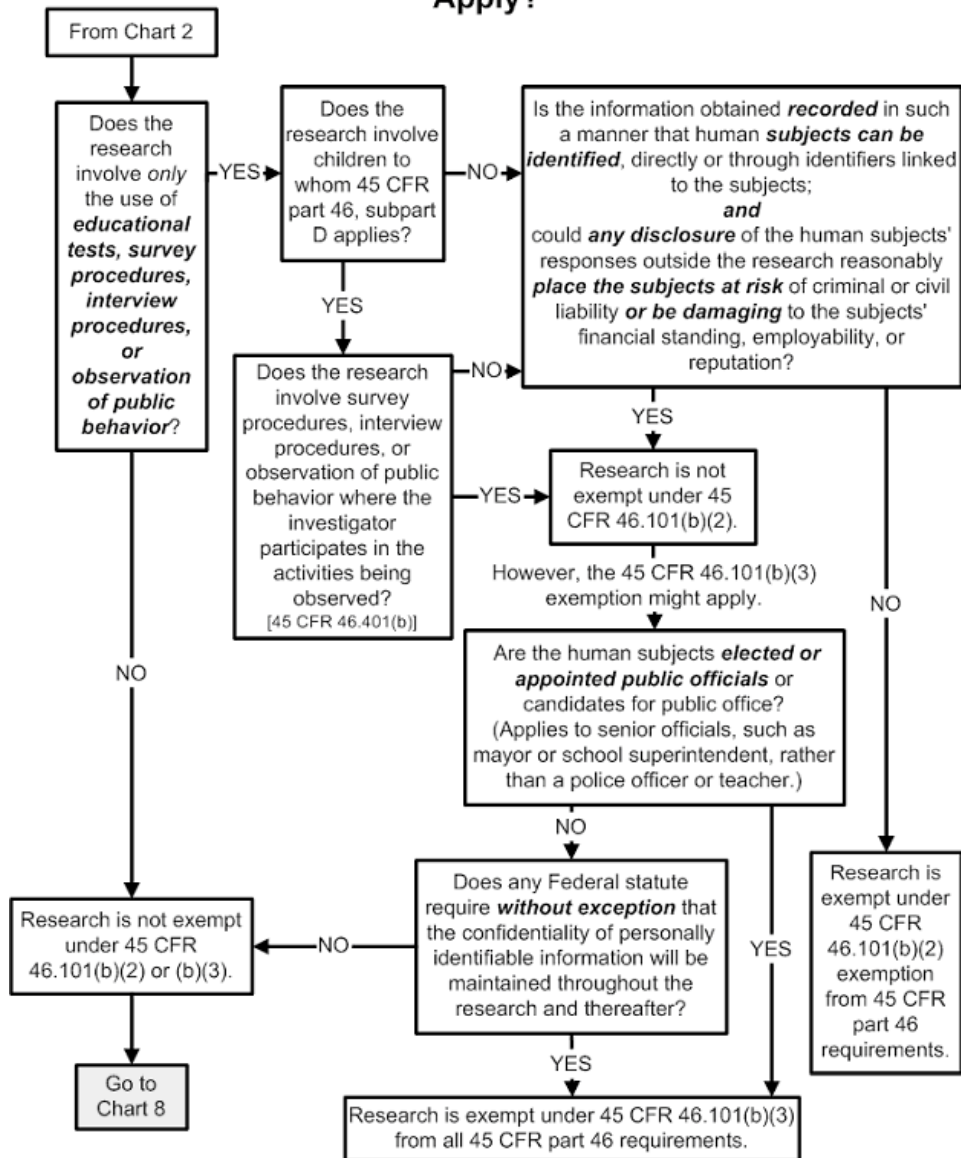


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Chart 3: Does Exemption 45 CFR 46.101(b)(1) (for Educational Settings) Apply?

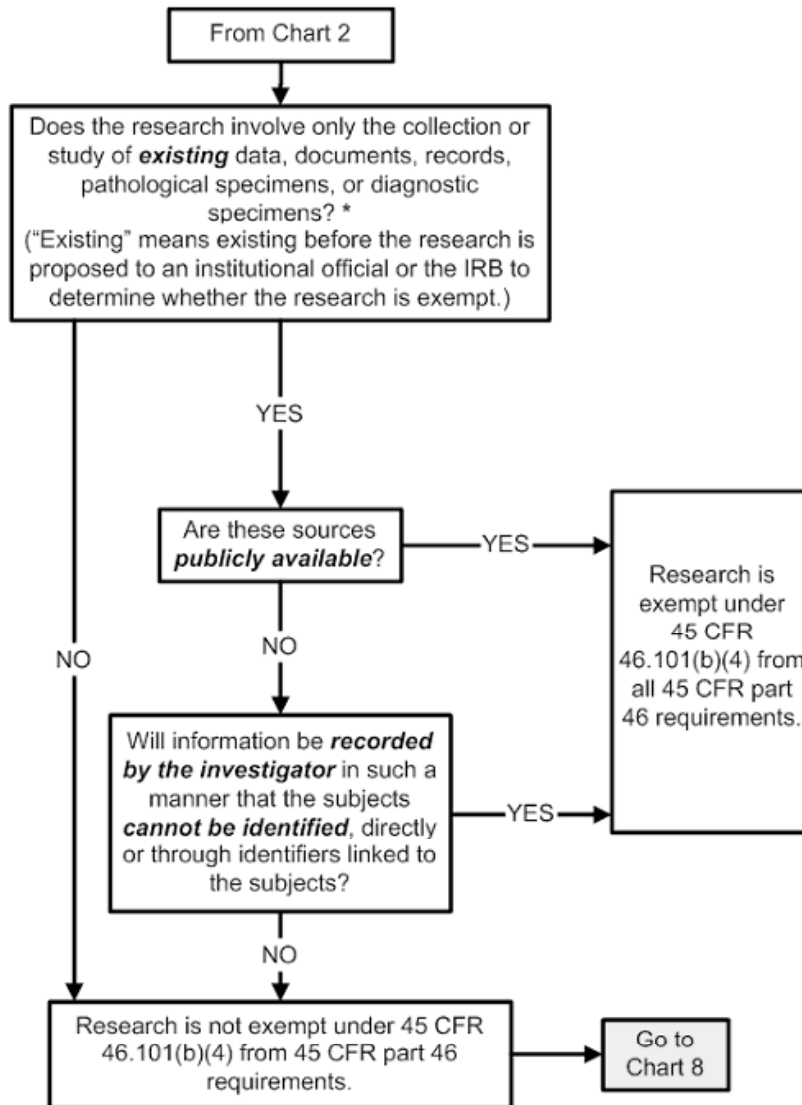


**Chart 4: Does Exemption 45 CFR 46.101(b)(2) or (b)(3)
(for Tests, Surveys, Interviews, Public Behavior Observation)
Apply?**



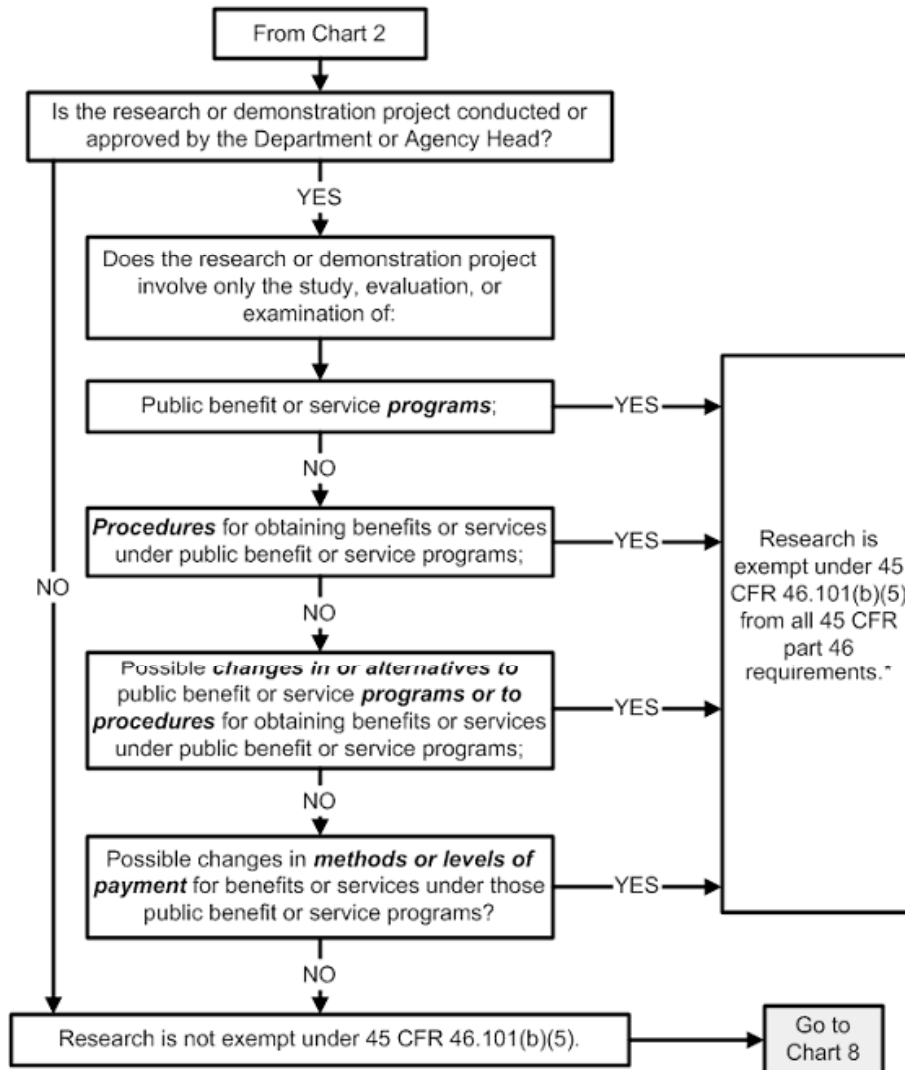
September 24, 2004

Chart 5: Does Exemption 45 CFR 46.101(b)(4) (for Existing Data Documents and Specimens) Apply?



* Note: See **OHRP** guidance on research use of stored data or tissues and on stem cells at <http://www.hhs.gov/ohrp/policy/index.html#tissues> and <http://www.hhs.gov/ohrp/policy/index.html#stem>, and on coded data (or specimens) at <http://www.hhs.gov/ohrp/policy/index.html#coded> for further information on those topics.

Chart 6: Does Exemption 45 CFR 46.101(b)(5) (for Public Benefit or Service Programs) Apply?



* Note: See OHRP guidance on exemptions at <http://www.hhs.gov/ohrp/policy/index.html#exempt> for further description of requirements for this exemption.

Chart 8: May the IRB Review Be Done by Expedited Procedures Under 45 CFR 46.110?*

* Note: See expedited review categories and OHRP guidance on the use of expedited review procedures at <http://www.hhs.gov/ohrp/policy/index.html#expedited> for further information on expedited review.

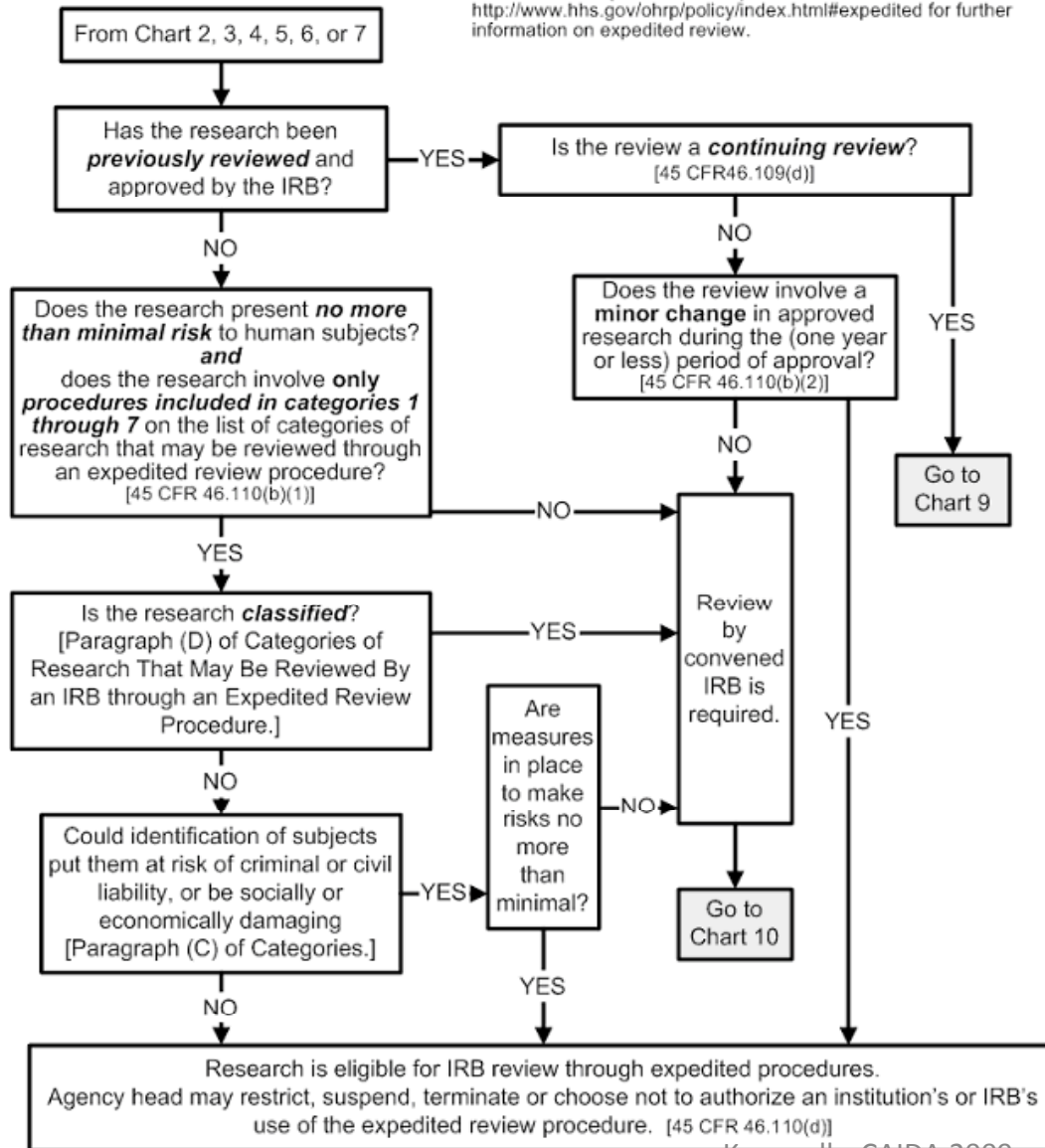
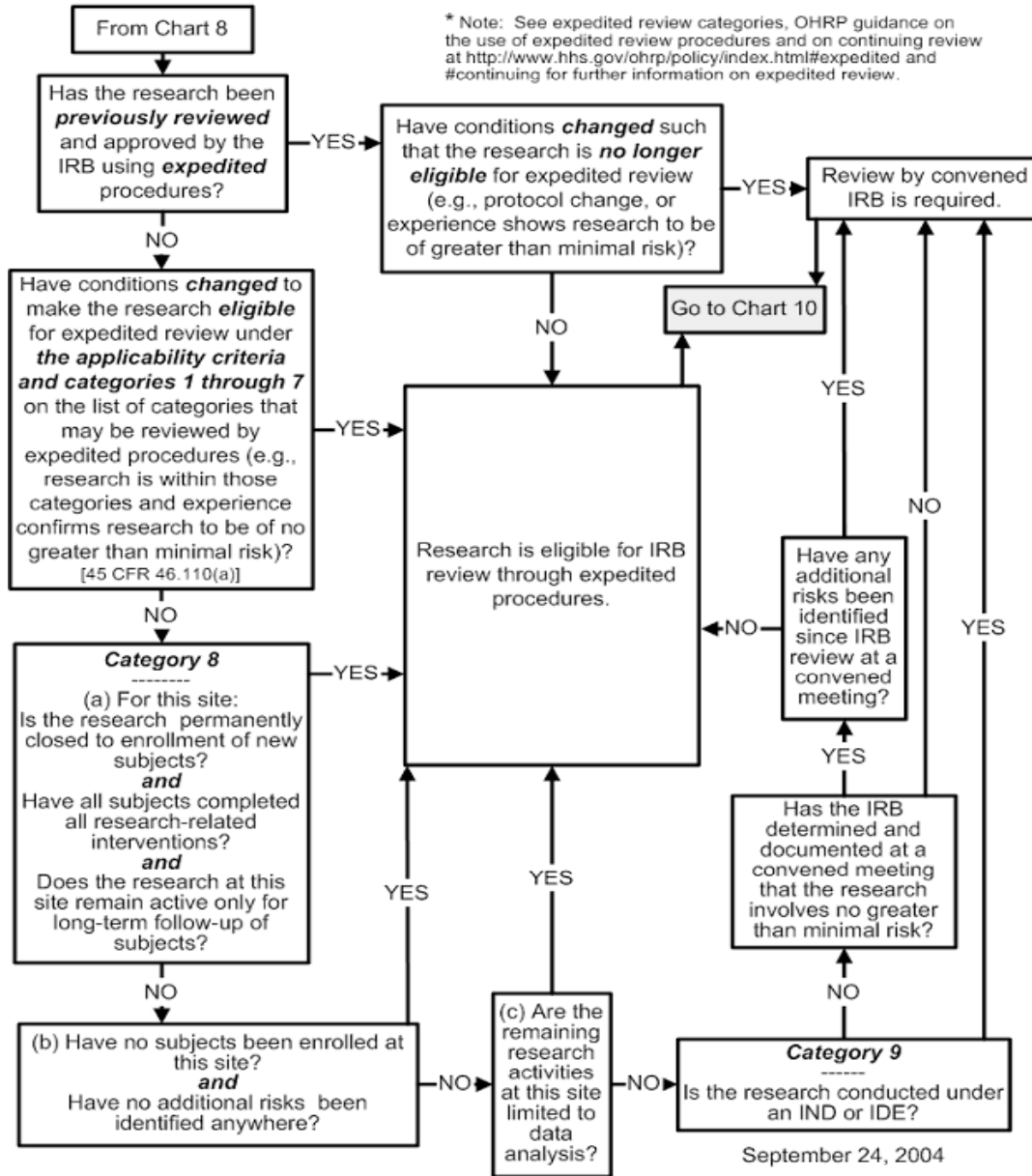


Chart 9: Can Continuing Review be Done by Expedited Procedures Under 45 CFR 46.110?

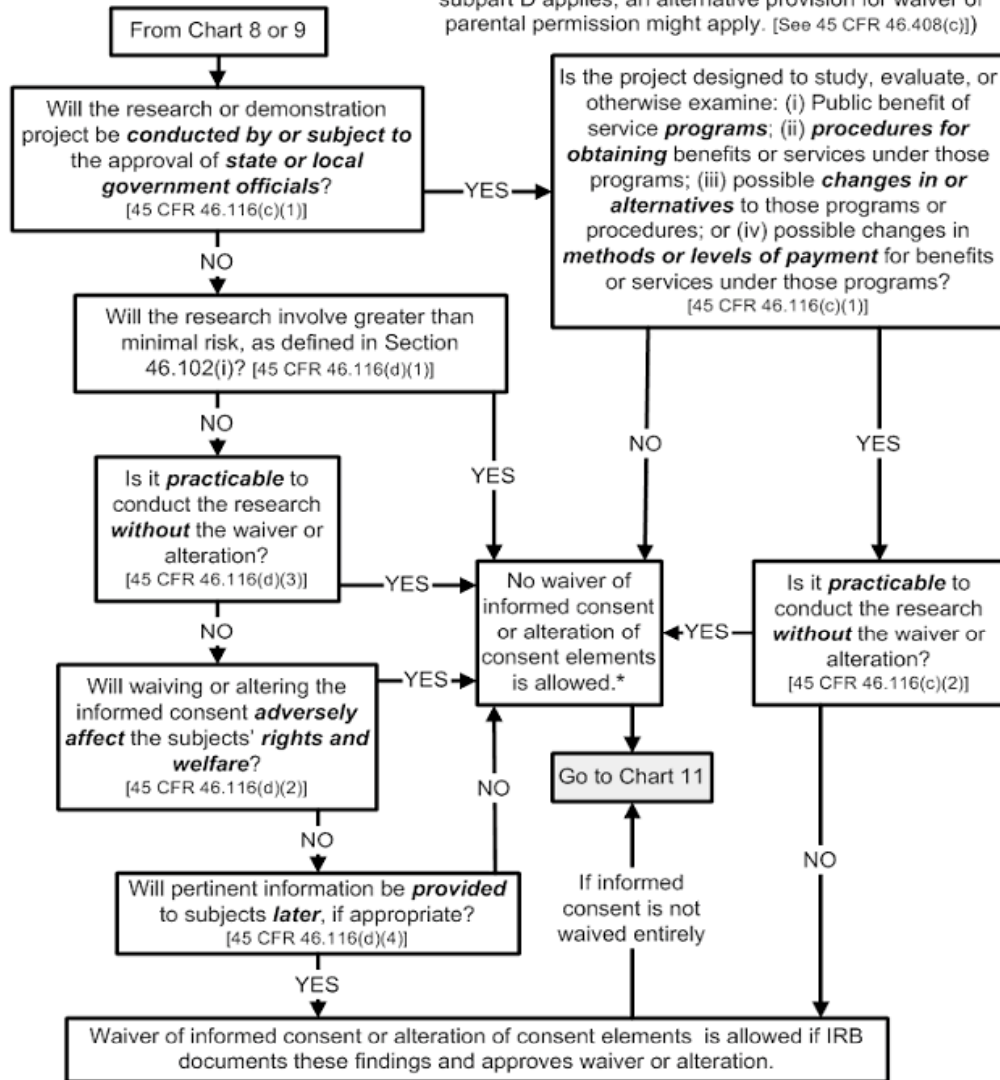
* Note: See expedited review categories, OHRP guidance on the use of expedited review procedures and on continuing review at <http://www.hhs.gov/ohrp/policy/index.html#expedited> and #continuing for further information on expedited review.



September 24, 2004

Chart 10: Can Informed Consent Be Waived or Consent Elements Be Altered Under 45 CFR 46.116(c) or (d)?**

** (Note: If subjects include children to whom 45 CFR part 46, subpart D applies, an alternative provision for waiver of parental permission might apply. [See 45 CFR 46.408(c)])



* Note: See OHRP guidance on informed consent requirements in emergency research at <http://www.hhs.gov/ohrp/policy/index.html#emergency> for further information on emergency research informed consent waiver.

Chart 11: Can Documentation of Informed Consent Be Waived Under 45 CFR 46.117(c)?

