

Alignment of US guidance for official statistics with ASA Ethical Guidelines for Statistical Practice

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Park & Tractenberg (2023) systematically examined:

- 1. ASA Ethical Guidelines for Statistical Practice (EG; ASA 2022)**
- 2. Statistical Policy Directives (SPD)***
 - SPD1
 - SPD2
 - SPD2a
- 3. Principles and Practices (PNP; NASEM 2021)**
- 4. Data Ethics Tenets (DET; OMB 2020)**

** SPD 3 and 4 also were also examined; due to their focused scope on particular statistical indicators, we excluded them from our primary analysis.*

ASA Ethical Guidelines (ASA, 2022)

A. Professional Integrity & Accountability (12)
B. Integrity of data and methods (7)
C. Responsibilities to Stakeholders (8)
D. Responsibilities to research subjects, data subjects, or those directly affected by statistical practices, Data Subjects, or those directly affected by statistical practices (11)
E. Responsibilities to members of multidisciplinary teams (4)
F. Responsibilities to Fellow Statistical Practitioners and the Profession (5)
G. Responsibilities of Leaders, Supervisors, and Mentors in Statistical Practice (5)
H. Responsibilities regarding potential misconduct (8)
APPENDIX: Responsibilities of organizations/institutions (12)

Method:

Systematic content analysis of professional ethical practice standard (ASA, 2022) with key Federal guidance documents

Identified patterns of alignment, tension, and gaps

- Degrees of Freedom Analysis
 - a. Adapted by Tractenberg (2019; 2023) for decision making
 - b. Content analysis to capture alignment (and potential for confusion/conflict) across narrative material
- Single coding scheme applied to each two-dimensional table

Summary coding for analysis across two dimensions

1. Analyzed alignment of each ASA **Guideline** Principle –not Appendix - with **another guidance**
2. **Result at intersection** coded in detail (Appendix) and summary form (main paper)

ASA Ethical Guidelines \ Comparison Guidelines	A	B	C	D	E	F	G	H
1								
2								
3								
4								

Coding Schema 1: Alignment

Definition	Example	Key
Alignment: Literal or conceptual match	<p>ASA EG D4: <i>“(the ethical statistical practitioner) Protects people's privacy and the confidentiality of data concerning them, whether obtained from the individuals directly, other persons, or existing records. Knows and adheres to applicable rules, consents, and guidelines to protect private information”</i> matches</p> <p>OMB SPD 1 Responsibility 4, <i>“Protect the trust of information providers by ensuring the confidentiality and exclusive statistical use of their responses.”</i></p>	D4 Or ✓
Similar match	<p>ASA EG D: <i>“Research Subjects/Data Subjects and Those Affected by Statistical Practices”</i> and</p> <p>OMB SPD 2, Survey Planning Standard 1.1: <i>Develop a written plan.</i></p>	(D) or (✓)
Pattern of alignment	Patterns of complete alignment across that row (or column) – green shading of row/column	✓

Coding Schema 2: Potential Conflict and Tension


Definition	Example	Key
Opposition: Potential conflict	ASA EG D10, <i>“(the ethical statistical practitioner) Understands the provenance of the data, including origins, revisions, and any restrictions on usage, and fitness for use prior to conducting statistical practices”</i> and NASEM PNP Principle 1, <i>“Federal statistical agencies must provide objective, accurate, and timely information that is relevant to important public policy issues.”</i> : <i>These may conflict if data are unfit for purpose, or permissions have not been obtained, but are deemed to be “relevant” for a policy issue.</i>	~D10 or ~
Tension: Coexisting alignment and conflict	OMB SPD 1 Responsibility 1, <i>“Produce and disseminate relevant and timely information”</i> , is well-aligned with ASA EG A2. <i>“Uses methodology and data that are valid, relevant, and appropriate, without favoritism or prejudice, and in a manner intended to produce valid, interpretable, and reproducible results,”</i> but could potentially cause conflict with achievement of ASA EG A3 <i>“Does not knowingly conduct statistical practices that exploit vulnerable populations or create or perpetuate unfair outcomes.”</i>	A2, ~A3 Or ✓, ~

Coding Schema 3: Unmatches and Guidance Gaps

Definition	Example	Key
Unmatched: Neither alignment (or nonalignment)	For example, ASA EG Principle F, responsibilities relating to other statistical practitioners and the profession offers no support or guidance for how to accomplish NASEM PNP Practice 9, “Dissemination of Statistical Products That Meet Users’ Needs.”	[blank]
Guidance gap	Patterns of unmatched content are identified across that row (or column)	[grey]

Results: Example of full table (detail – in Appendix): ASA x Data Ethics Tenets (no red)

TABLE 3: Correspondence between ASA Ethical Guidelines (2022) with US Data Ethics Tenets (2020)

ASA Ethical Guidelines (2022):	A Professional Integrity and Accountability	B Integrity of Data and Methods	C Stakeholders	D Research Subjects/Data Subjects and Those Affected by Statistical Practices	E Interdisciplinary Team Members	F Other Practitioners/Profession	G Leader/Supervisor/Mentor and APPENDIX	H Allegations of Potential Misconduct
Data Ethics Tenets (2020):								
1. Uphold applicable statutes, regulations, professional practices, and ethical standards.	A11	(B4)	C2 (C8)	D1, D9, D11	E; E1, E2	F; F1	(G; G1); G2, G5 APPENDIX 1, 2, 4, 7, 10, 11, 12	H; H1, H2, H3, H4
2. Respect the public, individuals, and communities	A; A2, A3, A4, A5, A7	B1, B3, B4, B5, B6	C; C1, C2, C8	D2, D5, D6, D7, D10, D11	E4	F1, F2, F3, F5	G2, G5 APPENDIX 1, 2, 6, 8, 9	H
3. Respect privacy and confidentiality.	(A3)	B4	C7	D4, D5, D7, D9, D10				(H4, H5, H6 - for practitioners- not for data subjects)
4. Act with honesty, integrity, and humility.	A; A1	B1, B2, B3	C1, C2, C3, C4, C8	D10	E2, E4	F3	G; G1, G2, G5 APPENDIX 1, 2, 4, 5, 8, 9, 10, 11	H2
5. Hold oneself and others accountable.	A9, A12		C1, C2	D; D1, D4, D10	E3, E4	F2, F3, F4, F5	G; G1, G2, G5 APPENDIX 1, 2, 4, 12	H2
6. Promote transparency.	A2, A7	B2	C1, C2, C4, C5, C6		E3	F4, F5	G5 APPENDIX 1, 2, 4, 8, 9, 10, 12	(H2)
7. Stay informed of developments in the fields of data management and data science.		B6	(C6)			(F4)	APPENDIX 3 (12) 	

Results: Summarized table (in body of paper): ASA x Data Ethics Tenets

ASA Ethical Guidelines (2022): Data Ethics Tenets (2020):	A Accountability	B Integrity	C Stakeholder	D Data Providers	E Other Disciplines	F Other Statisticians	G Leadership	H Misconduct
1 Uphold laws and regulations	✓	✓	✓	✓	✓	✓	✓	✓
2 Respect public	✓	✓	✓	✓	✓	✓	✓	✓
3 Respect privacy and confidentiality	✓	✓	✓	✓	✓			
4 Integrity	✓	✓	✓	✓	✓	✓	✓	✓
5 Accountability	✓		✓	✓	✓	✓	✓	✓
6 Transparency	✓	✓	✓		✓	✓	✓	✓
7 Stay informed		✓	✓			✓	✓	

Data Ethics Tenets are strongly and clearly aligned with ASA Ethical Guidelines for Statistical Practice

Results: Summarized Table: ASA x SPD 1-2-2A

ASA Ethical Guidelines \ OMB SPD Guidelines	A Accountability	B Integrity	C Stakeholder	D Data Providers	E Other Disciplines	F Other Statisticians	G Leadership, Appendix	H Misconduct
1.1 Relevant	✓~	✓	✓	✓~	✓		✓~	✓
1.2 Credible and accurate	✓	✓	✓	✓	✓	✓	✓	✓
1.3 Objective	✓	✓	✓	✓	✓	✓	✓	✓
1.4 Trust			✓	✓				
2.1.1 Written plan	✓	✓	✓	✓	✓		✓	
2.1.2 Survey design	✓	✓	✓	✓	✓		✓	
2.1.3 Response rate design	✓	✓	✓	✓			✓	
2.1.4 Functioning components	✓	✓	✓	✓	✓		✓	
2.2.1 Appropriate frame	✓	✓	✓	✓				
2.2.2 Notify respondents	✓	✓	✓	✓	✓		✓	
2.2.3 Balance quality v burden	✓	✓	✓	✓	✓			
2.3.1 Appropriate data edits	✓	✓	✓	✓	✓		✓	✓
2.3.2 Nonresponse analysis	✓	✓	✓	✓			✓	
2.3.3 Quality for other study	✓	✓	✓	✓		✓	✓	
2.3.4 Avoid disclosure	✓	✓	✓	✓	✓		✓	✓
2.3.5 Evaluate data quality	✓	✓	✓	✓	✓	✓		
2.4.1 Use theory and methods	✓	✓	✓	✓	✓	✓	✓	✓
2.5.1 Analysis plan	✓	✓	✓	✓	✓			
2.5.2 Good statistical practice	✓	✓	✓	✓	✓		✓	
2.6.1 Review dissemination	✓	✓	✓	✓	✓	✓	✓	
2.7.1 Equitable dissemination	✓	✓	✓	✓			✓	
2.7.2 Data protection	✓	✓	✓	✓				
2.7.3 Survey documentation	✓	✓	✓	✓~	✓	✓		
2.7.4 Public use microdata	✓	✓	✓	✓~	✓	✓	✓	
2.A.1 Methodological plan	✓	✓	✓	✓	✓	✓	✓	
2.A.2 Sample selection standard	✓	✓	✓	✓~				
2.A.3 Interview guide standard	✓	✓	✓					
2.A.4 Systematic analysis	✓	✓	✓	✓	✓	✓	✓	
2.A.5 Transparent analysis	✓	✓	✓	✓				
2.A.6 Final reports standard	✓	✓	✓	✓	✓			
2.A.7 Reporting results standard	✓	✓	✓	✓~	✓	✓	✓	

SPD 1-2-2A are strongly aligned with ASA Ethical Guidelines for Statistical Practice – especially Principles A, B, D – BUT there are some tensions identified.

**Results:
Summarized Table:
ASA x NASEM P&P**

ASA Ethical Guidelines (2022):	A Accountability	B Integrity	C Stakeholder	D Data Providers	E Other Disciplines	F Other Statisticians	G Leadership, Appendix	H Misconduct
NASEM P and P (2021):								
PRI1 Relevance	✓~	✓	✓	✓~	✓		✓~	
PRI2 Credibility	✓	✓	✓	✓	✓	✓	✓	✓
PRI3 Trust	✓	✓	✓	✓	✓	✓	✓	✓
PRI4 Independence	✓	✓	✓	✓	✓	✓	✓	✓
PRI5: Improvement	✓	✓	✓	~			✓	
PRA1: Mission	✓	✓	✓	✓	✓		✓	
PRA2: Authority	✓	✓	✓	✓	✓	✓	✓	✓
PRA3: Commitment	✓	✓	✓	✓	✓	✓	✓	✓
PRA4: Staff	✓	✓	✓			✓	✓	✓
PRA5: Research	✓~	✓	✓	~		✓	✓~	✓
PRA6: Evaluation	✓~	✓		✓	✓	✓	✓	✓
PRA7: Collaboration	✓~	~	✓~	~	~	✓~	✓~	~
PRA8: Respect	✓	✓	✓	✓		✓	✓	
PRA9: Users' Needs	~	✓~	✓~	✓~	✓~		~	~
PRA10: Transparency	✓	✓	✓	✓			✓	✓

NASEM P&P are aligned with ASA Ethical Guidelines for Statistical Practice – especially Principles 2-3-4 and Practices 2-3 – BUT there are some tensions identified

Results : SPD 1, 2 and 2A and DET

All DET align with SPD 1 Responsibilities 2 and 4 (credibility and trust) and SPD 2.1.4 (instrument function); 2.3.4 (disclosure avoidance). See also 2.7.2 (protection), and 2A.5 (transparency).

Areas of Mixed Alignment: SPD 1 (relevance) could conflict with all DET

OMB Data Ethics Tenets	T1 Uphold laws and regulations	T2 Respect public	T3 Respect privacy and confidentiality	T4 Integrity	T5 Accountability	T6 Transparency	T7 Stay informed
OMB SPD Guidelines							
1.1 Relevant	(~)	(~)	(~)	(~)	(~)	✓	(~)
1.2 Credible and accurate	✓	✓	✓	✓	✓	✓	(~)
1.3 Objective						✓	
1.4 Trust	✓	✓	✓	✓	✓	✓	(~)
2.1.1 Written plan	✓			✓	✓	✓	(~)
2.1.2 Survey design	✓			✓	✓		(~)
2.1.3 Response rate design	✓	✓		✓	✓	✓	(~)
2.1.4 Functioning components	✓	✓	(~)	✓	✓	✓	(~)
2.2.1 Appropriate frame	✓	(~)		✓	✓	✓	
2.2.2 Notify respondents	✓	✓	✓	✓	✓	✓	
2.2.3 Balance quality v burden	✓	(~)		✓	✓	✓	(~)
2.3.1 Appropriate data edits	✓	(~)		✓	✓	✓	(~)
2.3.2 Nonresponse analysis	✓			✓	✓	✓	(~)
2.3.3 Quality for other study	✓	✓	✓	✓	✓	✓	
2.3.4 Avoid disclosure	✓	✓	✓	✓	✓	✓	✓
2.3.5 Evaluate data quality	✓	(~)		✓	✓	✓	✓
2.4.1 Use theory and methods	✓			✓	✓	✓	✓
2.5.1 Analysis plan	✓				✓	✓	
2.5.2 Good statistical practice	✓		(~)		✓	✓	✓
2.6.1 Review dissemination	✓	(~)	✓	✓	✓	✓	
2.7.1 Equitable dissemination	✓	✓		✓	✓	✓	(~)
2.7.2 Data protection	✓	✓	✓	✓	✓	✓	
2.7.3 Survey documentation	✓					✓	
2.7.4 Public use microdata	✓	✓	✓			✓	
2.A.1 Methodological plan	✓			✓	✓	✓	(~)
2.A.2 Sample selection standard	✓	(~)		✓	✓	✓	
2.A.3 Interview guide standard	(~)				✓	✓	
2.A.4 Systematic analysis	✓						(~)
2.A.5 Transparent analysis	✓	✓	✓	✓	✓	✓	
2.A.6 Final reports standard	✓				✓	✓	
2.A.7 Reporting results standard	✓	(~)	(~)		✓	✓	

Results Summary: DET and PNP

Areas of tension: Principle 1 (relevance) Practice 7 (collaboration), and Practice 9 (dissemination of products) must be accomplished in balance with DET

OMB Data Ethics Tenets (2020): NASEM Principles and Practices (2021):	T1 Uphold laws and regulations	T2 Respect public	T3 Respect privacy and confidentiality	T4 Integrity	T5 Accountability	T6 Transparency	T7 Stay informed
PRI1 Relevance	(~)	√, ~	(~)	(~)	(~)	(~)	
PRI2 Credibility	✓	✓	✓	✓	✓	✓	✓
PRI3 Trust	✓	✓	✓	✓	✓	✓	✓
PRI4 Independence	✓	✓	✓	✓	✓	✓	
PRI5: Improvement	(✓)		✓		(✓)		✓
PRA1: Mission	(✓)					✓	
PRA2: Authority	✓		(✓)	✓	✓	✓	
PRA3: Commitment	✓	✓	✓	✓	✓	✓	(✓)
PRA4: Staff	✓			✓	✓		✓
PRA5: Research	(✓)		(~)			(✓)	✓
PRA6: Evaluation	✓	✓			✓	✓	
PRA7: Collaboration	~	~	(~)	(~)	(~)	(~)	✓
PRA8: Respect	✓	✓	✓		✓	✓	(✓)
PRA9: Users' Needs	~	~	(~)	(~)	(~)	√, ~	(✓)
PRA10: Transparency	✓	✓	✓	✓	✓	✓	(✓)

Results Summary: SPD 1, 2, 2A and PNP

Areas of Mixed Alignment: NASEM Practice 7 (collaboration) may cause tension or conflict with all elements of SPD 1, 2, 2a

Gap: NASEM Practice 4 (staff) with all SPD 1,2,2A. (should all be grey!)

NASEM Principles and Practices	OMB SPD Guidelines														
	PR1: Relevance	PR2: Credibility	PR3: Trust	PR4: Independence	PR5: Improvement	PR6: Mission	PR7: Authority	PR8: Commitment	PR9: Staff	PR10: Research	PR11: Evaluation	PR12: Collaboration	PR13: Respect	PR14: Users' Needs	PR15: Transparency
1.1 Relevant	✓	✓	✓			(-)	(-)								
1.2 Credible and accurate		✓	✓	✓	✓	✓	✓	✓							
1.3 Objective		✓	✓	✓	✓			✓							
1.4 Trust	✓	✓	✓				✓	✓							
2.1.1 Written plan		✓	✓					✓							
2.1.2 Survey design		✓	✓					✓							
2.1.3 Response rate design		✓	✓					✓							
2.1.4 Functioning components	(✓)	✓	✓				✓	✓							
2.2.1 Appropriate frame	(✓)	✓	✓				✓	✓							
2.2.2 Notify respondents		✓	✓					✓							
2.2.3 Balance quality v burden		✓	✓	(✓)(-)	✓			✓							
2.3.1 Appropriate data edits	(-)	✓	✓	(✓)(-)		✓		(✓)	✓						
2.3.2 Nonresponse analysis	(✓)	✓	✓					✓							
2.3.3 Quality for other study	(-)	✓	✓					(✓)(-)							
2.3.4 Avoid disclosure		✓	✓					(✓)							
2.3.5 Evaluate data quality	(✓)	✓	✓					(✓)							
2.4.1 Use theory and methods		✓	✓					✓							
2.5.1 Analysis plan	(✓)	✓	✓	(✓)(-)	(✓)		✓	✓							
2.5.2 Good statistical practice		✓	✓					(✓)(-)							
2.6.1 Review dissemination	✓	✓	✓	(✓)(-)	✓	✓		(✓)	✓						
2.7.1 Equitable dissemination	(✓)(-)	✓	✓	(✓)	✓			(✓)	✓						
2.7.2 Data protection		✓	✓					(✓)(-)							
2.7.3 Survey documentation		✓	✓	(✓)	✓			✓							
2.7.4 Public use microdata	(✓)	✓	✓		✓			✓							
2.A.1 Methodological plan		✓	✓	✓				✓							
2.A.2 Sample selection standard		✓	✓	(✓)				✓							
2.A.3 Interview guide standard		✓	✓	✓		✓		✓							
2.A.4 Systematic analysis		✓	✓	✓				(✓)							
2.A.5 Transparent analysis		✓	✓	✓				✓							
2.A.6 Final reports standard		✓	(✓)	✓				✓							
2.A.7 Reporting results standard		✓	(✓)	✓				✓							

Conclusions

Where guidelines align, professional norms are more easily established in policy

Where tensions and gaps are explicit, federal guidelines can be clarified and strengthened

Guidance is routinely reviewed and occasionally revised to address emerging needs

- examples may be effective to clarify how to prioritize – which guidance should be followed in case of ‘conflict’ or confusion?*
- amplify language regarding data providers, users’ needs, and staff training*

Guidance in these areas should be clarified before elevating to broader authority.