

## Compiled comments to the first draft

Section ID (chapter, paragraph, page)	Comment	Proposed change	Response
Pg. 1	I am not familiar with BSR	Why the shift from ANSI?	They are both the same, BSR is used by ANSI as a designation for standards under review.
Start of all chapters	The structure of each chapter seems a bit different. Some have a Purpose/Scope section, and some do not	Use the same structure for formatting each chapter	Agree, this will be done during copy editing.
Pg. 47	The purpose says ‘enhance operator performance during text...’ is performance the only thing we are interested in?	Should there be an addition of ‘reduce risk of health implications associated with MSDs?’	The proposed standard is a design standard, not a health and safety standard. Consequently, we make no claims regarding MSDs.
Pg. 47	There is a comment that the ‘tails’ were supplemented with data from the University of MI. As far as I know, only the upper tail was supplemented. Nothing was done for the <5 <sup>th</sup> percentile	Change to only the upper ‘tail.’	Agree. Change the wording to “The anthropometric data are based on the Society of Automotive Engineers’ CAESAR anthropometric database <sup>i,ii</sup> and are weighted to match the demographics of the 2011-2014 NHANES <sup>iii</sup> anthropometric survey. Additionally, as there were fewer individuals in the high BMI range of the CAESAR data than desired, the CAESAR data were supplemented with high BMI data supplied by the University of

			Michigan Transportation Research Institute (UMTRI) utilizing appropriate statistical methods”.
Pg. 48	“VFT” is a user-friendly tool...	This has not been assessed, and I have heard the opposite in many cases. I would remove ‘user-friendly.’	Agree. Removed “user-friendly”.
Pg. 48	Second paragraph needs a source	Include source	<p>Agree. Added the following references: Kreifeldt, J. G., &amp; Nah, K. (1995, October). Adding and Subtracting Percentiles—How bad can it be?. In <i>Proceedings of the human factors and ergonomics society annual meeting</i>(Vol. 39, No. 5, pp. 301-305). Sage CA: Los Angeles, CA: SAGE Publications.</p> <p>Ziolek, S. A., &amp; Wawrow, P. (2004). <i>Beyond percentiles: An examination of occupant anthropometry and seat design</i> (No. 2004-01-0375). SAE Technical Paper.</p> <p>Robinette, K. M., &amp; McConville, J. T. (1981). An alternative to percentile models. <i>SAE Transactions</i>, 938-946.</p> <p>Kroemer, K. H. (1984). Engineering anthropometry. In <i>Ergonomic data for equipment design</i> (pp. 101-114). Springer, Boston, MA.</p> <p>Guan, J., Hsiao, H., Bradtmiller, B., Kau, T. Y., Reed, M. R., Jahns, S. K.,</p>

			<p>... &amp; Piamonte, D. P. T. (2012). US truck driver anthropometric study and multivariate anthropometric models for cab designs. <i>Human factors</i>, 54(5), 849-871.</p> <p>Gordon, C. C., Corner, B. D., &amp; Brantley, J. D. (1997). <i>Defining Extreme Sizes and Shapes for Body Armor and Load-Bearing Systems Design: Multivariate Analysis of US Army Torso Dimensions</i> (No. NATICK/TR-97/012). Army Natick Research Development and Engineering Center MA.</p>
Pg. 48	The VFT ‘SOLVES’...	I think we have not proven it solves, maybe change to ‘attempts to solve’	Agree. Changed “solve” to “addresses” this issue
Pg.49	Reference posture Image	Did we discuss redoing this image?	Retain current graphic, but modify “Declined Sitting” to “Forward-Tilted Sitting”, add ghost image of foot on footrest to standing posture.
Pg. 52	Figure 6 missing angle labels	Add angles	<p>Disagree. The specification states that the torso to thigh angle must be at least 90°, which is consistent with the graphic.</p> <p>The graphic has been re-drawn.</p>
Pg. 53	Definitions of Lean/Perch/Stool	Why are these included? I do not believe we ever agreed to include	These terms are commonly used, so it is appropriate to define them for use in this standard.

		these definitions, and they really have no relevance in this document, to my knowledge. Not to mention their placement feels odd...I would like to see them removed from the document because we do not have any recommendations or thoughts for design (or strong evidence of ergonomic merits)	
Pg. 55	Radii of Edges – source?	I had tried to find any research regarding this recommendation and could not find any. Where does this number come from?	Agree. The only reference for this appears to be industry practice; “shall” has been replaced with “should.”
Pg. 55	“concurrently accommodate at least 90 percent...”	Repetitive. Need to remove?	Disagree. Leave statement as it stands.
Pg. 57	Label on Figure 9 is incorrect. Should be Figure 7 (propagated after as well)	Ensure all labeling is correct.	Figure numbering has been corrected.
Pg. 67	The clearance between armrests	Arm pads or uprights? Should we specify?	As per modified text in draft.
Pg. 69	Device Cabling	This seems like it is in the wrong section. We	Agree. A section heading was inadvertently omitted, the heading

		either need to clarify why its there, or move it.	“Other Considerations” has been added as section 5.26.
Acknowledgements	I had requested a student from the UofI do some research for us a few years ago (Kelsey Smithart). As a committee, we had promised her acknowledgement. I can give you more information as needed, but we need to follow through with this.	Include acknowledgement	Agreed, all contributors will be included in the acknowledgements.
General comment for chapter 5	I was quite surprised when this document was released with the dimensions for review from the larger community. The last document I had reviewed had all dimensions highlighted, and it was my understanding that we were going to discuss internally as a smaller group prior to making this information available more broadly.		As with any ANSI document, the specifications are only final when approved by the consensus group.

General comment for chapter 5	The way the numbers (dimensions) are presented is confusing. It is difficult to understand whether dimensions include allowances or not. For example, phrasing such as “including a clothing allowance,” and “with a clearance allowance” are used in different places. Do they mean the same thing? Is the allowance added or not?		Agree. As clothing allowances are somewhat arbitrary, the standard has been rewritten without any such allowances.
General	Acknowledge student contribution		Agreed, all contributors will be included in the acknowledgements.

Section ID (chapter, paragraph, page)	Comment	Proposed change	Response
Section 5, conformance, p48	The second l of <b>shall</b> is not bolded	<b>shall</b>	Agreed; fixed.
Section 5, Installation and Configuration of Computer	Ensure that the configured workstation is properly adjusted to fit users individually.	Ensure that the configured workstation is adjustable to fit users individually.	Disagree. The employer should ensure that their employees understand how to appropriately adjust their workstation equipment through training, etc.

Workstations, p53			
Section 5, Seated Clearances, p57	... The width requirement is based on female hip breadth. ADD the proposed change	Surface thickness and clearance space should include any mounting and/or cable storage mechanisms under the work surface	The depths of the clearance space under the desk are based on the assumption that the chair is drawn under the desk. Consequently, the recommended width of the under-table clearance space is now based on the width of the user's chair
Section 5, Primary work surface and monitor surface depth, p59	As common monitor sizes have increased up to 27-40" and use of multiple monitors more common, the 50cm distance is inadequate. <b>Rempel, etal. recommended 50(near) to 73cm(middle)</b> (The Effects of Visual Display Distance on Eye Accommodation, Head Posture, and Vision and Neck Symptoms) <b>Article (PDF Available) in <a href="#">Human Factors The Journal of the Human Factors and Ergonomics Society</a> 49(5):830-8 · November 2007</b>  The OSHA eTool recommends <i>Figure 1. Preferred viewing distance is 20 to 40 inches</i>	<i>Allow a viewing distance of at least 50 cm (19.7 in.)</i> <b>ADD</b> A range of 50-73cm viewing distance is common for groups of users.	Agree. The requested note has been added.
Appendix	Is a Mobile and distributed work appendix still applicable. My last draft version was post 2015 input		At this time, we do not offer specific guidance for mobile or distributed work.

Section ID (chapter, paragraph, page)	Comments	Proposed Changes	Response
1.1 paragraph 2, page	Legal definition of reduction to practice: the process of demonstrating that an invention works correctly for its desired purpose. I do not believe this is a commonly used term and am not sure the intended user of this standard would be familiar with this term.	Consider editing text.	Accept. Change wording from "reduction to practice" to "application to practice"
Page 12 - Figure 3-6	The figure caption cites split and tilt (gable). But, the figure itself only shows 2 types of split.	Change the figure caption to remove "tilt (gable)", or add a figure with the gable shown. Consider adding a note about the two types of split - fixed and adjustable shown in the figure.	The drawing has been modified with separate drawings for split, negative tilt and gable angles
page 17 , figure 3-8	No mice use rolling balls anymore, and this inclusion makes the standard look dated.	I'd propose an updated figure that removes a rolling ball from the figure.	A new figure of an optical mouse has been added
page 22	I am not aware of any pucks in current manufacture, and it's been quite awhile since they've been used. Again, the inclusion here makes the standard look dated.	I'd propose removing the section on pucks. The size recommendations are the same as for mice anyway.	Pucks have been eliminated from the chapter
page 22-23 - touch input	Touch input has become much more important recently, and I feel that this section should be expanded. Some examples include recommended surface characteristics (texture, or friction), and recommendations on the force-to-fire for buttons embedded into touchpads. Latency for touch screens is also an important consideration.	Will require more research for specific values and recommendations.	The touch input section has been modified

**PUBLIC**

<b>Section ID (chapter, paragraph, page)</b>	<b>Comment</b>	<b>Proposed change</b>	<b>Response</b>
Page 2	Only 2 manufacturers and 1 test lab in North America currently have the ISO CMD.	Include BIFMA CMD as an option for measuring chairs until ISO CMD is more available in North America.	The BIFMA CMD has been referenced.
Page 48	Accommodation % is stated as 90% but when I put in all the numerical values for the shall statements associated with seated workstations I got an accommodation of 86.8% for men, 85.2% for women, and 86.0% for both. This is, of course, assuming I used the tool correctly.	Do we need to consider changing the accommodation percentage to 85%?	As the movement and clothing allowances are somewhat arbitrary, they are not used in the revised standard. Consequently, the accommodation percentage is within the recommended range.
Page 50	Declined Sitting isn't the term used by the furniture industry for this posture or how it's commonly referred to.	Change "Declined Sitting" to "Forward Tilt" to align with terminology used by furniture industry and how this posture is commonly discussed.	Agreed, replaced with "Forward tilted posture". Add ghost image to show foot supported on footrest in standing picture  Add note that the term declined sitting has been replaced with forward tilt.

Page 53	Title for Figure 6 is on different page than figure.	Move Title so on same page as figure.	Agreed.
Page 53	Definitions for Lean, perch, Stool and Prop. Why are these definitions here? They are never discussed or referred to in the rest of the chapter/standard. Additionally, the definitions aren't broad enough to include all of the types of seating that would currently fit into those categories.	Proposal one: remove definitions from the standard.  Proposal two: if leave definitions in, need to refine the definitions as well as provide guidance around how they are used in the workstation; i.e, lean should include more than just a contoured edge/vertical support, perch, stool and prop shouldn't include a full seat, perch shouldn't specify no back, and honestly, I'm not familiar with the term "Prop" so maybe a better term for this category.	Agree with proposal two: As these terms are commonly used in practice; definitions have been included in this standard.
Page 54	Dimensional Measurements - Refer to comment for Page 2 in reference to allowable measuring devices.		A reference to the BIFMA CMD has been added to the standard.
Page 54	Dimensional Measurements – there is no discussion as to the acceptable way to measure work surfaces for compliance to the standard or the acceptable measurements tolerances.	Add measurement method/tolerances for measuring work surfaces.	The CMD document references tolerances, and includes tolerances for linear measurements other than chairs; in general tolerances are $\pm 1.5$ mm
Page 55	Pinch points – should we provide numerical guidance for pinch points as European standards do?	Consider including the following numerical guidance for pinch points: either $< 8$ mm (0.3 in) or $\geq 25$ mm (1.0 in)	Agreed. The suggested pinch point dimensions have been added to the standard.

Page 57	Paragraph discussing what dimensions define the required clearances lists “height of the knee” for the clearance height for the side opposite the reference point but it is not shown on Figure 7 nor is there a numerical requirement for it listed on page 58 with the other clearance requirement measurements.	Add requirements for height of knee to Figure 7 and clearance space requirements.	Agreed, added knee height to clearance space
Page 58	Measurements including allowances for shoe height, movement, etc. In this format, including both measurements is confusing.	Either remove the measurements without the allowances included or change to a table format so information is more clear.	Agreed, measurements will be given only for barefoot, minimally-clothed dimensions with a note that allowances can be added at users’ discretion
Page 58	“Adjustable between 48 and 66.2 cm (20.1....)” 20.1” should be 18.9”	Change 20.1” to 18.9”	Agreed, the correction has been made.
Page 58	Depth at knee level says 39.4 cm but tool says 95 <sup>th</sup> %tile male value is 387 mm.	Determine which value is correct. If value in standard includes an allowance, just include this information.	The measurement value specified has been changed as suggested.
Page 58	Depth at foot level says 56.1 cm but tool says 95 <sup>th</sup> %tile male value is 544 mm.	Determine which value is correct. If value in standard includes an allowance, just include this information.	The measurement value specified has been changed as suggested.

Page 58	Depth at foot level: “)3.9 in)” – parenthesis is in wrong direction.	Correct so “(3.9 in)”.	Agreed
Page 58	Standing height clearance for foot is listed as 10 cm – where is this value from?	Recommend using lateral malleolus height + shoe allowance; i.e., in BIFMA this equates to 114 mm.	Agreed, changed to 100 mm allowance
Page 59	Standing depth clearance for foot is listed as 10 cm – where is this value from?	Recommend aligning with 2010 ADA which states 152 mm.	Agreed, changed to 100 mm allowance
Page 61	Figure 8 – I know we’ve used this figure before, but the person really appears to be reaching forward instead of having the upper arm hanging vertically by the side.	Revise figure.	Disagree, picture is consistent with expected working postures.
Page 61	Not sure I understand what this statement is supposed to mean “Adjust side-to-side within the optimal area for input devices.”	Get clarification on statement and revise if necessary.	Agree, changed “optimal” to “recommended”
Page 62	Work surface height requirements for English units are missing shoe allowance at low end.	Change 21.8 to 23	Clothing allowances are not used in the current version of the standard.
Page 63	Work surface height requirements for English units are missing shoe allowance at low end.	Change 21.8 to 23	Clothing allowances are not used in the current version of the standard.
Page 63	Stand-biased workstations: What is meant by “shall have sufficient friction to prevent sliding on the floor during ingress or egress”?	Clarify statement.	The statement has been clarified to “Have sufficient friction to prevent the chair sliding on the floor during ingress or egress”

Page 63	Stand-biased workstations: What is the reference for the elbow height placement in relation to the work surface?	Provide reference for recommendation.	This section has been removed.
Page 63	Stand-biased workstations: foot support – where are these recommendations from? They seem pretty small. Should they be the same as the recommendations for footrests?	Consider recommending the same recommendations for footrests here.	The specification has been changed to be consistent with the specification for footrests in general (Section 5.24)
Page 65	Last sentence on page – extra “the” in sentence after the word “recline”	Remove extra “the” from sentence.	agree
Page 66	Seat height requirements for English units are missing shoe allowance at low end.	Change 13.3 to 14.5	Clothing allowances are not used in the current version of the standard.
Page 66	Seat depth – this measurement generally subtracts out a clearance allowance. Consider using the same value as BIFMA which is 10 mm.	Subtract clearance allowance from 5 <sup>th</sup> percentile measurement.	Agree, change dimensions to allow 10 mm clearance
Page 66	Seat Width – using the 95 <sup>th</sup> percentile female hip breadth can really disaccommodate smaller users, consider using the 90 <sup>th</sup> percentile hip breadth instead.	Use 90 <sup>th</sup> percentile female hip breadth for seat width requirement.	It is important to accommodate the 95 <sup>th</sup> percentile seated hip breadth, so that will remain. A note (note #2, page 79) has been added to address smaller users, including the use of

			smaller chairs and adjustable armrests
Page 66	Seat pan angle – this is based on industry practices not research.	Change shall to a should.	Agreed, changed to should
Page 66	Seat pan-backrest angle range of within 90 to 120 degrees allows the backrest to go less than 90 degrees with measurement tolerances.	Include a statement that seat pan-backrest angle shall always be greater than or equal to 90 degrees while seated.	Agreed, the specification has been modified to indicate that the angle should be $\geq 90^\circ$ while seated.
Page 67	Backrest height - what is this measurement based on?	Use value based on anthropometric measurements (i.e., tenth rib midspine, sitting)	No specification is given for chair back height in the current standard.
Page 67	Lumbar – doesn't include recommendations for adjustable lumbar	Include recommendations for adjustable lumbar.	Modified text to include specification for fixed and adjustable lumbar supports.
Page 67	Recommendations for Clearance between Armrests is included twice.	Remove the recommendation for Clearance between Armrests from the adjustable armrests section.	The wording of the requirement has been changed to indicate that the adjustment range should include a width of 530 mm.
Page 68	Dimensional Measurements - Refer to comment for Page 2 in reference to allowable measuring devices.		The standard now refers to both BIFMA and ISO CMD references
Page 68-69	Sections on Adjustable Surfaces, Pinch Points, and Device	Delete these sections from end of standard.	Eliminate second mention of these topics

	Cabling are already in the standard in a previous section.		

<b>Section ID (chapter, paragraph, page)</b>		<b>Proposed change</b>	<b>Response</b>
Chapter 1. Scope page 1	requirements for user is implied.	This standard specifies requirements and recommendations for users requirements	Suggested correction has been made.
Chap 3 p20	Not sure a puck reflects current tablet use	Eliminate puck	Puck section has been eliminated
Chap 3 p28	The statement that multiple displays are set higher seems unnecessary	Strike-through multiple displays are set higher	Research has suggested that slightly raising multiple displays is less stressful to the user.
Chap 3 p30	Negative tilt has been defined	Replace rearward tilt with negative tilt	Rearward tilt has been replaced with negative tilt.
Chap 3 p32	Update to the measure of pupil diameter	The cited study is 7 years old, suggest either making the change or deleting the statement	This section has been modified as suggested.
Chap 3 p33	Update to flicker rate research for SSL	The cited recommendations are several years old, suggest either making the change or deleting the statement	This section has been modified as suggested
Chap 5 p58	Number 57.9 on the figure is unclear	Use type font	Agree, the figure has been redrawn
Chap 5 p60	Simplify the sentence seated only, standing only, or	While seated or standing	Agreed, sentence has been simplified.

	while seated or standing		
Chap 5 p63	Add knee clearance to stand bias workstation	At least 39.4 cm (15.5 in) deep at the level of the knee, or 43.9 cm (17.3 in.) deep at the level of the knee with a 4.5 cm clearance allowance	Agreed, knee clearance has been added as suggested
Other issues	Ball as seats, treadmills, and exercise bikes		The standard now states the same objectives for the level of accommodation with desks, chairs, etc. applies, although these are not described in this standard.
	Wireless connection for keyboard and mouse		already covered by cable statement in Device Cabling section
	Users with disabilities - adjustment the users can make for accommodation		Any user should be able to use the workstation within the postural specifications given in Furniture Chapter. It is not the intent to specifically accommodate users with disabilities as the needs may vary considerably for each user.
	In general, given the standard of anti-fatigue surfaces for stand capable workstations in most offices, Should we mention those and suggest basic concepts around friction, tapered		These issues have been addressed in section

	edges and safety for walking and rolling/positioning seating on them?		
	Consider if Figure 1 in Chapter 5 should include some variation of Standing (a 5 <sup>th</sup> posture) that is supported with either a footrail or a seating product such as a prop/perch/lean as defined below.		Figure 5.1 has been modified to show a foot supported on a rest
	<p>Lean support -a type of support in which some of the body weight is supported by leaning against a contoured edge or vertical support that is rigid. Minimal body weight is supported by the lean support, the rest is on the feet, which are always on the floor. Posture is mostly standing.</p> <p>Perch - a type of seating support with a rigid and full seat, no back, and which supports most user weight on the seat but with some supported by the feet, which can be on</p>		These definitions have been added in section 5.6

	<p>the floor or on rings or rungs attached to the perch. Posture is seated but open.</p> <p>Stool - a tall chair with a full seat and back in which all the user's weight is supported by the stool. A stool may include arm rests, foot rings or foot rails and various styles of bases. Posture is seated</p> <p>Prop - a type of seating support with a full seat, typically no arms, but feet are always in contact with the floor and the seat may pivot and or free float. Normally attached to a flat base that feet stay in contact with during use. Posture is nearest standing.</p> <p><b>Footrests</b> Footrests <b>shall</b> Be provided when the range of adjustment of the chair, work surface, or both, does not permit the person's feet to be supported on the floor.</p>		<p>The definition of footrest dimensions has been made consistent throughout the document.</p>
--	--	--	--

	<p>To provide support for placement of feet, a footrest for seated work <b>should BE ABLE TO BE POSITIONED</b> 20 cm (7.9 in.) deep into the workstation underside. Be at least 51 cm (20.1 in.) wide and <del>20 cm (7.9 in.) deep</del>. Be height-adjustable up to 22 cm (8.7 in.) and may be adjustable in angle (pitch).</p>		
	<p><b>Support Surfaces</b></p> <ol style="list-style-type: none"> <li>1. Primary work surface: The main surface where the worker will be performing most work and or computer-related tasks.</li> <li>• Display (or monitor) support: A surface, arm or another device used to support a monitor or display at a</li> </ol>		<p>The suggested definitions have been added to the document.</p>

	<p>workstation. Add</p> <ul style="list-style-type: none"> <li>• Input-device support surface: A surface such as a desk top or keyboard tray used to support input devices such as keyboard, mouse, etc.</li> <li>• A combined Input-device and Monitor support, such as a scissors-lift, configured to allow adjustment to sit or stand work</li> </ul>		
	<p><b>Adjustable Surfaces</b> Adjustable workstation surfaces <b>shall</b> Use a fail-safe mechanism to prevent inadvertent movement (what does this mean for manual desktop units???) – spring loaded locking</p>		<p>After discussion, the section has been left as originally written.</p>

	<p>mechanism always wants to click into locked position?)</p> <p>Use a control locking mechanism to prevent inadvertent operation. (such as two hand levers requiring simultaneous operation or electronic feedback on contact or loading from obstructions) Leave as currently stated</p> <p>Should allow monitor and keyboard depths and viewing distances at least equal to the minimum viewing distance specified (50 cm) elsewhere in this standard for workstations when monitors are placed on for desktop units.</p>		
--	--	--	--

Section ID (chapter, paragraph, page)	Comment	Proposed change	Response
3, 1, 11	It will be helpful to reader to have an adjoining graphic to show the horizontal plane created by the back of the hand and forearm	Add a graphic to this paragraph	Agreed, a drawing has been added as Figure 3.5.
3, 1, 14	S <sub>h</sub> is missing in Figure 3-7	Add S <sub>h</sub> to the Figure	Agreed, the drawing (Fig. 3.8) has been modified to include S <sub>h</sub>
3	The #s with the figures do not match the #s with the text, including 3-8, 3-9, 3-10, 3-11. # sequencing is incorrect between 3-12 and 3-15.		Agreed, figures have been renumbered.
Page 4.	Perhaps a section on Anthropometry (e.g. hand size), akin to accommodating handedness in the <b>Handedness</b> section:	<p><b>PROPOSED ADDITIONAL SUBSECTION AND DRAFT CONTENT:</b></p> <p>Anthropometry Input devices should</p> <ul style="list-style-type: none"> <li>• Accommodate a range anthropometry, such as reach and hand size. (I see this as a 'one-size-fits-all' concept)</li> </ul> <p>When reasonable, input device geometry should</p> <ul style="list-style-type: none"> <li>• Be adjustable by users (I see this as 'one-device-has-many-sizes' concept)</li> </ul>	The proposed language has been added to the handedness section of chapter 3.

Section ID (chapter, paragraph, page)	Comment	Proposed change	Response
Global	Consider numbering individual statements to improve traceability and referencing in documentation.	3.1 Design Specifications 3.1.1 General Specifications The following specs... 3.1.1.1 Input devices placed on a stable...should 3.1.1.2 Integrated buttons...	Agreed, the section has been modified as suggested.
p.4, Intentional movements	“There must be a balance...” should not be a must statement, as it not verifiable.	“A design tradeoff exists between: the effort and force... easily and; the need for the device”.	Reworded to eliminate the ‘must’ statement
Global	Consider restructuring the guidance into individual statements. The bullet points can be used when a list of sub-statements is presented.	Grip Surface The grip surfaced should be sized, shaped, and...  Input devices should...	Agreed, the section has been modified as suggested.

i SAE CAESAR Measurements on CD-ROM, North American Edition

ii Robinette, K. M., & McConville, J. T. (1981). An alternative to percentile models. *SAE Transactions*, 938-946.

iii Fryar, C. D., Gu, Q., Ogden, C. L., & Flegal, K. M. (2016). Anthropometric Reference Data for Children and Adults: United States, 2011-2014. *Vital & health statistics. Series 3, Analytical and epidemiological studies*, (39), 1.