

## UCLA Health Impact Decision Support Tool (DST)

Release May 2010

### Example of alternative-specific criteria score definitions, basis, data summary and mean score in pretest for workplace activity breaks

Criteria and score definitions	Basis	Data from research literature (Citations)	Mean pretest score (N=4)
<b>1. Start-up costs</b> 3. ≤\$100/participant/yr 2. \$100-\$250/person/year 1. >\$250/person/year	Participant staff time; CDs/DVDs for variety (many available free of charge on internet); minimal coordination (e.g., wellness coordinator or program champion); 4-6 hrs training for program champion or all participants in the case of teachers	In PAAC, required 1 6-hr teacher in-service training at beginning of year—each paid \$100;; in Fit WIC, required 1 half-day training during regular paid time; in REACH, required 0.5 hr x 8 sessions  (Pronk et al., 1995; Honas et al., 2008; Gibson et al., 2008; Donnelly et al., 2009; Crawford et al., 2004; Yancey, Lewis et al., 2006; Stewart et al., 2004; Murray, 2009)	3.0
<b>2. Speed of implementation</b> 3. ≤1 year 2. 2-3 years 1. >3 years	Trialability=strength of intervention approach; may be done by following leader, or with CD/DVD guidance	Over Yr 1, increased from 40% to 70% of teachers meeting +90-100 min/wk goal in PAAC; by Yr 2 end, 9/14 intervention schools delivering ≥ 75 min/wk (Honas et al., 2008; Gibson et al., 2008)	3.0
<b>3. Political will/community receptivity</b> 3. Good 2. Fair 1. Poor	Economic recession may present opportunity for elected officials to support because essentially budget-neutral	(none specified)	2
<b>4. Reliability &amp; consistency of implementation</b> 3. Good 2. Fair 1. Poor	Arbitrary—IT implementation support tools (CDs, DVDs, web-based materials) make readily exportable and replicable/reproducible	(Yancey et al., 2004; Yancey, L et al., 2006; Yancey, Winfield et al., 2009)	2.25

Criteria and score definitions	Basis	Data from research literature (Citations)	Mean pretest score (N=4)
<p><b>5. Likelihood of sustainability</b> (e.g. given typical organizational leadership changes)</p> <p>3. <math>\geq 2</math> yrs 2. 1-2 yrs 1. &lt;1 yr</p>	<p>Builds on existing infrastructure, e.g., teacher in-service training, employee safety or wellness committees. Several studies have documented long-term sustainability, but level of leadership stability not clear.</p>	<p>(Sibley et al., 2008; Lara et al., 2008; Donnelly et al., 2009)</p>	<p>1.75</p>
<p><b>6. Availability of critical adjuncts to realize effects</b> (e.g., ongoing social marketing efforts targeting low-income minority populations)</p> <p>3. Only modest limited additional inputs necessary for at least five years 2. Significant additional resources are necessary, prohibitive in less than <math>\frac{1}{2}</math> of target communities and not more than equivalent of 50% of program cost 1. Significant additional resources are necessary, prohibitive in <math>\frac{1}{2}</math> or more of target communities or equivalent to 50% of program cost</p>	<p>Annual training (4-6 hrs) sufficed in school-based interventions. Workplace-based interventions probably require 4 hrs upfront, quarterly 2-hr boosters, &amp; periodic technical assistance and incentives</p>	<p>(Honas et al., 2008; Donnelly et al., 2009)</p>	<p>2.75</p>
<p><b>7. Scalability</b> (<i>optional criteria added</i>)</p> <p>3. Good 2. Fair 1. Poor</p>	<p>Characteristics consistent with large-scale expansion beyond piloting include mediated delivery, simplicity, cultural adaptability, applicability across sectors and population segments</p>	<p>(none specified)</p>	<p>(not included in pretest)</p>
<p><b>8. Quality and quantity of scientific evidence</b></p> <p>3. At least one large RCT with good control of potential confounders 2. Multiple studies, generally in same</p>	<p><math>\geq 3</math> domestic RCTs demonstrating long-term effectiveness on outcomes of interest; 1 RCT demonstrating immediate-term psychological benefit; several demonstration</p>	<p>(a) Feasibility of implementation, in terms of organizational receptivity, successful initiation. (Crawford et al., 2004; Lloyd et al., 2005; Yancey, L et al., 2004; DuBose et al., 2008; Gibson et al., 2008)</p>	<p>2.25</p>

Criteria and score definitions	Basis	Data from research literature (Citations)	Mean pretest score (N=4)
<p>direction 1. <math>\leq 2</math> good quality studies in the same direction, or more studies with mixed results</p>	<p>projects with pre-test/post-test design; several corporate wellness case studies</p>	<p>(b) Exercise breaks improved repetitive motion injuries and symptoms (Pronk et al., 1995)</p> <p>(c) Exercise breaks improve bone density and architectural strength (Liu et al., 2008)</p> <p>(d) Exercise breaks decreased depressive symptoms (Pronk et al., 1995; Yancey, L et al., 2006)</p> <p>(e) Exercise breaks prevented weight gain or induced weight loss (Lara et al., 2008; Donnelly et al., 2009)</p> <p>(f) Exercise breaks increased PA during workday or school day, and/or outside org. setting (Lloyd et al., 2005; Mahar et al., 2006; Yancey, L et al., 2006; Honas et al., 2008; Donnelly et al., 2009)</p> <p>(g) Exercise breaks increased counseling behavior by service providers (Crawford et al., 2004)</p> <p>(h) Exercise breaks influenced fitness or health self-assessment--more realistic or accurate impression (Yancey, M et al., 2004)</p>	
<p><b>9. Short-term efficacy (e.g. MET-min/day, calories expended, steps)</b> 3. &gt;1000 steps/d or &gt;1 d/wk 2. 500-1000 steps/d or 0.25-1 d/wk 1. &lt;500 steps/d or &lt;0.25 d/wk</p>	<p>Self-reported PA, pedometer- or accelerometer-documented steps or MVPA minutes</p>	<p>Energizers, NC; PAAC, KS; Take 10!, GA; REACH, CA--&gt;0.3 day vigorous PA/wk; Happy 10, Beijing--&gt;2 hr/d (Mahar et al., 2006; Lloyd et al., 2005; Yancey, Lewis et al., 2006; Liu et al., 2008; Mahar et al., 2006; Stewart et al., 2004)</p>	<p>2.25</p>

Criteria and score definitions	Basis	Data from research literature (Citations)	Mean pretest score (N=4)
10. Effectiveness in saving aggregate Quality-Adjusted Life-Years (QALYs) <ol style="list-style-type: none"> <li>3. ↓ BMI 1kg/m<sup>2</sup>/yr</li> <li>2. prevent wt gain</li> <li>1. no effect on BMI</li> </ol>	Arbitrary	-0.4 kg/m <sup>2</sup> & -1.6 cm/yr (Lara et al., 2008) -2 kg/yr or 1 kg/m <sup>2</sup> /yr in girls (Liu et al., 2008); (Pronk et al., 1995; Lara; Donnelly et al., 2009; Yancey, L et al., 2008)	2.0
<b>13. Secondary health benefits (e.g. improved nutrition from increased physical activity)</b> <ol style="list-style-type: none"> <li>3. Significant benefits likely</li> <li>2. Some benefits</li> <li>1. Few or no secondary benefits</li> </ol>	Physiological studies indicating that exercise bouts increase consumption of water and water-bearing foods; exercise as relative appetite suppressant; exercise decreases plate waste in school cafeterias	Recess Before Lunch (Westerterp & Plantenga et al., 1997; Getlinger et al., 1996)	2.0
<b>14. Potential dose effects (exposure and reach)</b> <ol style="list-style-type: none"> <li>3. Good</li> <li>2. Fair</li> <li>1. Poor</li> </ol>	Captive audience strategy—overwhelming majority of adults and especially children can be exposed, and settings pervasive	RE-AIM framework; Meta-Motivation Model (Glasgow et al., 2006; Yancey, 2009)	2.5
<b>15. Cost-effectiveness</b> <ol style="list-style-type: none"> <li>3. &lt;\$15000/QALY</li> <li>2. \$15000-\$25000/QALY</li> <li>1. &gt;25000/QALY</li> </ol>	Tengs (1995) found median CE of preventive med. strategies was \$19000/life-year saved. Median CE for Project MOVE interventions was \$16680/QALY (range \$9000-\$29984/QALY).	apply using Lara et al. (2008) effect size = 0.4 kg/m <sup>2</sup> /yr; (Wang et al., 2003)	2.75
<b>16. Part of synergistic continuum of intervention strategies cumulative potential</b> <ol style="list-style-type: none"> <li>3. Good</li> <li>2. Fair</li> <li>1. Poor</li> </ol>	Anchoring comprehensive org. wellness program	Exercise breaks mandatory across 13 work units at LL Bean (excl. admin. Office). Aside from breaks, only 20-25% of employees access any other wellness services, e.g., using on-site fitness facilities, completing HRA, obtaining risk reduction counseling (CDHS, 2004; Yancey, 2010)	3.0
<b>17. Other benefits (e.g. organizational)</b>	Productivity increases, attrition decreases, healthcare cost decreases,	(Pronk et al., 1995; CDHS, 2004; Sibley et	2.25

<b>Criteria and score definitions</b>	<b>Basis</b>	<b>Data from research literature (Citations)</b>	<b>Mean pretest score (N=4)</b>
3. Significant benefits likely 2. Some benefits 1. Few or no secondary benefits	fewer RN visits, worker's comp claim decreases, disciplinary referral decreases, academic performance increases	al., 2008; Donnelly et al., 2009)	
<b>18. Magnitude of aggregate health effects (benefits) in high-risk or target populations</b> 3. Benefits accrue to all 2. Benefits accrue to most 1. Benefits accrue to some	Benefits of exposure to PA intervention may accrue to all, to most, or only to some, depending on health status, income level, obesity level, fitness level, ethnicity of subjects	Sedentary workers derive more benefit from work breaks (Yancey 2004); White workers respond to stair prompts but Blacks do not (Andersen et al. 1998); (Yancey, McCarthy et al., 2004 ; Kerr et al., 2001)	2.5
<b>19. Reductions in existing disparities due to differential utilization or uptake</b> 3. Favors least active 2. Equal effects across populations 1. Favors more active	Structured group exercise break intervention emerged from ethnic minority populations and/or low-income groups	Participation in dance traditions embraced by communities of color across lifespan; women more likely than men to prefer dance (qualitative only) (Flores et al., 1995; Leslie et al., 1999 (TAP); Day, 2006; IOM, 2006; Marcus et al., 2006; Yancey, Ory & Davis, 2006)	2.25

**Criteria not shown (no additional guidance provided):**

- 10. Effectiveness in the general population
- 11. Effectiveness in target population (specificity)
- 20. Proximal and distal distributional effects on different population segments

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