Preventing Skin Cancer: Multicomponent Community-wide Interventions

Summary Evidence Table

Study Details	Population Characteristics	Intervention Characteristics	Outcome Measures:	Effect Estimates
Author and date: Office of National Statistics, 2010 **Study Design:** Before After **Quality of Execution:** Fair **Location:** UK	**Target Population:** General **Settings:** Schools, workplace, recreation centers, community wide (mass media and social media)	**Intervention:** Sun Smart Campaign **Duration:** 2003 to 2012 **Reach:** Nationwide **Intervention components:** Individually directed, policy changes, and mass media **Control Group:** N/A	**Baseline Date:** 2003 **Follow-Up Date:** 2010 **Outcomes of Interest:** Sun Protective Behaviors 1. Use of Sun screen(high factor sun screen) 2. Use of clothing 3. Use of shade Risk Factors 4. Avoidance of sunbeds 5. 2.Avoidance of sun exposure (limit the time spent in sun)	**Change in sun protective behaviors:** 1. Use of Sun screen (prevalence %) Base line (n=1840): 37.2%; Follow-up (n=1000): 48 Absolute change: 10.8 pct. pt. (95% CI: 7.0%, 14.6%) 2. Use of clothing (prevalence %) Base line (n=1840): 32.5%; Follow-up (n=1000): 32.5% Percent point change: no change 3. Use of shade (prevalence %) Base line (n=1840): 29.1%; Follow-up (n=1000): 33.5% Absolute change: 4.4 pct. pt. (95% CI: 0.8%, 8.0%) Risk factors: 4. Avoidance of sunbeds (prevalence %) Base line (n=1840): 1.2 Follow-up (n=1000): 5.2 Percent point change: 4.0 increase(95% CI: 2.5, 5.5) 5. Avoidance of sun exposure (prevalence %) Base line (n=1840): 8.5 Follow-up (n=1000): 11.3 Percent point change: 2.8 (95% CI: 0.5, 5.1)

Study Details	Population Characteristics:	Intervention Characteristics	Outcome Measures:	Effect Estimates
Author and date: Dobbinson, 2008 **Study Design:** Before After **Quality of Execution:** Fair **Location:** Melbourne, Australia	**Target Population:** General **Settings:** Day care centers, schools, outdoor recreation centers, workplace, primary care offices, community wide(media)	**Intervention:** Sun Smart program **Duration:** 1988 to date; **Reach:** Nationwide **Intervention components:** Individually directed, policy and environmental changes, and mass media; **Control Group**: N/A	**Baseline Date:**: 1987/88 **Follow-Up Date:** 1988/89 – 2001-02 (9 surveys) **Outcomes of Interest:** Sun Protective Behaviors 1. Use of Sun screen(SPF12+) 2. Use of clothing (Clothing worn while doing outdoor activity) 3. Use of hat (hat use and hat type while doing outdoor activity) Risk Factors 4. Avoidance of sun exposure (Limiting outdoor activities on the previous Saturday and Sunday (between 11am and 3pm) and how much time they spent doing the activity)	**Change in sun protective behaviors:** 1. Use of sun screen: (prevalence %) BL FU 87/88 88/89 89/90 91/92 94/95 97/98 99/00 00/01 01/02 N= 1098 832 746 884 888 755 583 626 615 12.1% 17.9% 18.9% 23.7% 34.8% 34.6% 32.2% 35.7% 27.0% 2. Use of hat: (prevalence %) BL FU 87/88 88/89 89/90 91/92 94/95 97/98 99/00 00/01 01/02 N= 1098 832 746 884 888 755 583 626 615 20.5% 28.6% 31% 37.6% 42.5% 42.5% 40.2% 45.4% 38.9% 3. ¾ or long sleeved top worn: (prevalence %) BL FU 87/88 88/89 89/90 91/92 94/95 97/98 99/00 00/01 01/02 N= 1098 832 746 884 888 755 583 626 615 16.3% 17.7% 19.8% 21.4% 15.6% 21.1% 23.3% 12.6% 27.4% Risk factors: 4. Avoidance of sun exposure: (minutes) BL FU 87/88 88/89 89/90 91/91 94/95 97/98 99/00 00/01 01/02 N= 1098 832 746 884 888 755 583 626 615 Mins= 127.8 133 127.1 130.4 121.6 130.8 119.7 120.7 122.7 **Incidence of sun burn (in children): (prevalence %)** 1.Decrease in Sunburn: (% of people) BL FU 87/88 88/89 89/90 91/91 94/95 97/98 99/00 00/01 01/02

			<u>Incidence of sun burn</u> Weekend sunburn (any amount of reddening of the skin after being in the sun) – yesterday or on Saturday, Sunday	N= 1098 832 746 884 888 755 583 626 615 14.1% 11.5% 8.4% 12.6% 12.8% 8.6% 8.3% 13.2% 9.1% **Results from Dobbinson '08b (2006-07 national Sun Protection Survey: Report 2)** 2003-04 2006-07 N= (967) (871) (Prevalence %) Use of sun screen (SPF15+) 31 35 Use of hat 44 46 ¾ or long sleeved top worn 21 23 Decrease in Sun burn 17 11 (Minutes) Time spent outdoors 117.5 116 Incidence **Dixon' 08: Observational trend data on use of sun-protective clothing at outdoor leisure settings from 1992 to 2002** Increase in people's use of sun-protective clothing occurred during the SunSmart campaign from 1992-2002 (19.5% in males and 10.5% in females)

Study Details	Population Characteristics:	Intervention Characteristics	Outcome Measures:	Effect Estimates
Author and date: **Olson,** 2007 **Study Design**: Group RCT **Quality of Execution:** Fair **Location:** USA	**Target Population:** Adolescents (6-8 grades) **Settings:** Middle schools, primary care settings, recreation centers	**Intervention:** Sun Safe program **Duration:** 1996 to 2004 **Reach:** Local (10 towns in New Hampshire) **Intervention components:** Individually directed, policy and environmental changes **Control Group:** No intervention	**Baseline Date:**: 2000 **Follow-Up Date:** 2001-03 (each year) **Outcomes of Interest:** Sun Protective Behaviors 1.Sunscreen use (sunscreen use by youth at beach/pool areas) 2.Overall protective behavior(Proportion of the individual adolescent's body surface area protected from sun by clothing, sunscreen, or shade)	**Change in sun protective behaviors:** 1. Use of Sunscreen (prevalence %) Baseline Control (n=433) 65.8% Intervention (n=343) 58.0% Follow up Control (n=138) 13.8% Intervention (n=349) 47.0% Absolute change: 41.0 pct. pt. (95% CI: 33.2, 48.8) 2. Overall protective behaviors (prevalence %) Baseline Control (n=433) 73.7% Intervention (n=343) 71.8% Follow up Control (n=138) 56.8% Intervention (n=349) 66.1% Absolute change: 11.2 pct. pt. (95% CI: 1.6, 20.8)

Study Details	Population Characteristics:	Intervention Characteristics	Outcome Measures:	Effect Estimates
Author and date: Dietrich, 2000 **Study Design:** Group RCT **Quality of Execution:** Fair **Location:** USA	**Target Population:** Children 2-11 yrs. **Settings:** Primary schools, maternity units, day care centers, primary care practices, outdoor recreation centers	**Intervention:** Sun Safe program **Duration:** 1996 to 2004 **Reach:** Local (10 towns in New Hampshire) **Intervention components:** Individually directed, policy and environmental changes; **Control Group:** No intervention	**Baseline Date:**: 1995(June- August) **Follow-Up Date:** 1997(June- August) **Outcomes of Interest:** Sun Protective Behaviors 1.Use of sunscreen (child was protected by sunscreen on at least one body area) 2.Use of clothing (protected by at least one item of clothing) 3.Use of shade (protected by shade) 4.Overall protective behavior (protected on at least one body area by sunscreen, clothes, or shade)	**Change in sun protective behaviors:** 1. Use of sunscreen (prevalence %) Baseline Control (n=408): 55.0%; Intervention (n=446) 44.0% Follow up Control (n=744) 53.0%; Intervention (n=746) 63.0% Absolute change: 21.0 pct. pt. (95% CI: 16.0,26.0) 2. Use of clothing (prevalence %) Baseline Control (n=408) 27.0%; Intervention (n=446) 18.0% Follow up Control (n=744) 28.0%; Intervention (n=746) 17.0% Absolute change: -2.0 pct. pt. (95% CI: -6.2, 2.2) 3. Use of shade (prevalence %) Baseline Control (n=408) 9.0%; Intervention (n=446) 8.0% Follow up Control (n=744) 14.0%; Intervention (n=746) 13.0% Absolute change: No change (95% CI: -3.5, 3.5) 4. Overall protective practices (prevalence %) Baseline Control (n=408) 7.3%; Intervention (n=446) 5.8% Follow up Control (n=744) 70.0%; Intervention (n=746) 67.0% Absolute change: 12.0 pct.pt.(95% CI: 7.3, 16.7)

Study Details	Population Characteristics:	Intervention Characteristics	Outcome Measures:	Effect Estimates
Author and date: Miller, 1999 **Study Design:** Before After **Quality of Execution:** Fair **Location:** USA	**Target Population:** Children (0-13 yrs.) **Settings:** Maternity units, day care centers, elementary schools, outdoor recreation centers, community wide(media)	**Intervention:** Falmouth Safe Skin Project **Duration:** 1994-97 **Reach:** Local(Falmouth, MA) **Intervention components:** Individually directed, mass media **Control Group:** N/A	**Baseline Date:**: October 1994 **Follow-Up Date:** October 1997 **Outcomes of Interest:** <u>Sun Protective Behaviors</u> 1.Use of sun screen In children (parents proxy for children) (wears sun screen 6 of 6 hours outside) In Parents (wears sun screen outside usually) 2.Use of hat in children (wears hat at beach usually) 3.Use of clothing in children (wears shirt at beach)	**<u>Change in sun protective behaviors</u>** In children (parents proxy for children) 1. Use of sun screen (% used sun screen) Among < 6 yrs. old children Base line (n=222) 42.9%; Follow up(n=172) 43.9% Absolute change: 22.5 pct. pt. (95% CI: 13.0%, 32.0%) Among 6-13 yrs. old Base line (n=284) 54.6%; Follow up(n=305) 55.0 Absolute change: 17.0 pct. pt. (95% CI: 9.2%, 25.0%) Among parents Base line (n=506) 72.8%; Follow up(n=477) 79.6% Percent Point change: 6.8 pct. pt. (95% CI: 1.5%, 12.1%) 2. Use of hat (% wear hat at beach) Among < 6 yrs. old children Base line (n=222) 49.1%; Follow up (n=172) 46.7% Absolute change: -2.4 pct. pt.(95% CI: -12.3%,7.5%) Among 6-13 yrs. old Base line (n=284) 26.1%; Follow up(n=305) 22.3% Absolute change: -3.8 pct. pt. (95% CI: -10.7%,3.1%) 3. Use of clothing (% wear shirt at beach) Among < 6 yrs. children Base line (n=222) 58.4%; Follow up(n=172) 53.7% Absolute change: -4.7 pct. pt. (95% CI: -14.6%, 5.2%) Among 6-13 yrs. old

				Base line (n=284) 46.4%; Follow up(n=305) 35.4% Absolute change: -11.0 pct. pt. (95% CI: -18.9%,-3.1%)
			<u>Risk Factors</u> 4. Avoidance of UV exposure among children and parents- Limiting time in sun (sunbathe less than used to)- converted the numbers) **Incidence of sun burn (in children)-** did child ever had a painful sunburn	<u>Risk factors (children and parents):</u> 1. Avoidance of sun exposure practices (% sunbathe less) Among 6-13 yrs. children Base line (n=284) 93.2%; Follow up (n=305) 96.0% Absolute change: 2.8 pct. pt. (95% CI: -0.9%,6.5%) Among parents Base line (n=506) 96.9%; Follow up (n=477) 98.2% Absolute change: 1.3 pct. pt. (95% CI: -0.6%,3.2%) **<u>Incidence of sun burn (in children): % of children</u>** Among < 6 yrs. olds Base line (n=222) 18.6%; Follow up(n=172) 3.2% Absolute change: -15.4 pct. pt. (95% CI: -21.2% -9.6%) Among 6-13 yrs. olds Base line (n=284) 46.8%; Follow up(n=305) 40.0% Absolute change: -6.8 pct. pt. (95% CI: -14.8%, 1.2%)

Study Details	Population Characteristics:	Intervention Characteristics	Outcome Measures:	Effect Estimates
Author and date: NSW cancer council,1998 **Study Design:** Before After **Quality of Execution:** Fair **Location:** Australia	**Target Population:** Children (0-11yrs.) **Settings:** Child care centers, schools, community wide (media)	**Intervention:** Seymour Snowman **Duration:** 1997-2000; **Reach:** State wide(NSW) **Intervention components:** Individually directed, environmental changes, and mass media **Control Group:** N/A	**Baseline Date:**: 1997; **Follow-Up Date:** 1997/98 – 1999/2000(end of each summer) **Outcomes of Interest:** <u>Sun Protective Behaviors</u> 1.Sunscreen use(Sunscreen use in children and parents) 2. Use of clothing (Clothing use in children and parents) 3. Use of hat (Clothing use in children and parents) 4. Use of shade (Clothing use in children and parents)	**<u>Change in sun protective behaviors:</u>** 1. Use of sunscreen Absolute change from 1997-2000 Parents: 7.5 pct. pt.; Children: 7.8 pct. pt. 2. Use of clothing Absolute change from 1997-2000 Parents: 8.3 pct. pt; Children: 8.2 pct. pt 3. Use of hat Absolute change from 1997-2000 Parents: -3.4 pct. pt; Children: -4.8 pct. pt 4. Use of shade Absolute change from 1997-2000 Parents: 6.3 pct. pt; Children: 5.8 pct. pt

Study Details	Population Characteristics:	Intervention Characteristics	Outcome Measures:	Effect Estimates
Author and date: Rassaby, 1983 **Study Design:** Before After **Quality of Execution:** Fair **Location:** Australia	**Target Population:** General **Settings:** Outdoor recreation centers, community wide (mass media)	**Intervention:** Slip! Slap! Slop! **Duration:** 1980-1986 **Reach:** Local(Melbourne) **Intervention components:** Individually directed, environmental changes, and mass media **Control Group:** N/A	**Baseline Date:**: December 1980 **Follow-Up Date:** February 1982 **Outcomes of Interest:** Sun Protective Behaviors 1.Use of sunscreen 2.Use of hat	**Change in sun protective behaviors:** 1. Sunscreen use (prevalence %) Males (%) Base line (1980-81): 53%; Follow up (1981-82): 57% Absolute change: 8.0 pct. pt. (95% CI: -3.4%, 1.94%) Females (%) Base line (1980-81): 63%; Follow up (1981-82): 67% Absolute change: 6.0 pct. pt (95% CI: -4.8%, 1.68%) 2. Use of hat (prevalence %): Males (%) Base line (1980-81): 55%; Follow up (1981-82): 67% Absolute change: 12.0 pct. pt (95% CI: 0.9%, 23.1%) Females (%) Base line (1980-81): 53%; Follow up (1981-82): 57% Percent Point change: 4.0 pct. pt.(CI: -7.4%, 15.4%)