

```

data ps_allstates;
    set in.allstates_set121013;

    dob_d=day(DOB);
    dob_m=month(DOB);
    dob_y=year(DOB);

    age_2003=(mdy(1,1,2003)-DOB)/365.25;
    birth_month=dob_m+(dob_y-2003)*12;
    ageout_month=dob_m+((dob_y+18)-2003)*12;
run;

data ps_allstates;
    set ps_allstates;

    array monthdays month_3_1-month_3_12 month_4_1-month_4_12
        month_5_1-month_5_12 month_6_1-month_6_12
        month_7_1-month_7_12 month_8_1-month_8_12
        month_9_1-month_9_12;
    array chip chip_flag_3_1-chip_flag_3_12 chip_flag_4_1-chip_flag_4_12
        chip_flag_5_1-chip_flag_5_12 chip_flag_6_1-chip_flag_6_12
        chip_flag_7_1-chip_flag_7_12 chip_flag_8_1-chip_flag_8_12
        chip_flag_9_1-chip_flag_9_12;

    do i=1 to 84;
        if birth_month>i then do;
            monthdays(i)=0;
            chip(i)=0;
        end;

        if ageout_month<i then do;
            monthdays(i)=0;
            chip(i)=0;
        end;
    end;
run;

data ps_allstates;
    set ps_allstates;

    %macro month(month,days);
        if month_&month > &days then month_&month=&days;
    %mend month;

```

```

any_days_&month=(month_&month > 0);
covered_&month=(month_&month ge &days/2);
days_out_&month=&days-month_&month;
if chip_flag_&month=3 then do;
    covered_&month=1;
    any_days_&month=1;
    month_&month=&days;
    days_out_&month=0;
end;
%mend month;

```

```

%month(3_1,31);
%month(3_2,28);
%month(3_3,31);
%month(3_4,30);
%month(3_5,31);
%month(3_6,30);
%month(3_7,31);
%month(3_8,31);
%month(3_9,30);
%month(3_10,31);
%month(3_11,30);
%month(3_12,31);
%month(4_1,31);
%month(4_2,29);
%month(4_3,31);
%month(4_4,30);
%month(4_5,31);
%month(4_6,30);
%month(4_7,31);
%month(4_8,31);
%month(4_9,30);
%month(4_10,31);
%month(4_11,30);
%month(4_12,31);
%month(5_1,31);
%month(5_2,28);
%month(5_3,31);
%month(5_4,30);
%month(5_5,31);
%month(5_6,30);
%month(5_7,31);

```

%month(5_8,31);
%month(5_9,30);
%month(5_10,31);
%month(5_11,30);
%month(5_12,31);
%month(6_1,31);
%month(6_2,28);
%month(6_3,31);
%month(6_4,30);
%month(6_5,31);
%month(6_6,30);
%month(6_7,31);
%month(6_8,31);
%month(6_9,30);
%month(6_10,31);
%month(6_11,30);
%month(6_12,31);
%month(7_1,31);
%month(7_2,28);
%month(7_3,31);
%month(7_4,30);
%month(7_5,31);
%month(7_6,30);
%month(7_7,31);
%month(7_8,31);
%month(7_9,30);
%month(7_10,31);
%month(7_11,30);
%month(7_12,31);
%month(8_1,31);
%month(8_2,29);
%month(8_3,31);
%month(8_4,30);
%month(8_5,31);
%month(8_6,30);
%month(8_7,31);
%month(8_8,31);
%month(8_9,30);
%month(8_10,31);
%month(8_11,30);
%month(8_12,31);
%month(9_1,31);

```

%month(9_2,28);
%month(9_3,31);
%month(9_4,30);
%month(9_5,31);
%month(9_6,30);
%month(9_7,31);
%month(9_8,31);
%month(9_9,30);
%month(9_10,31);
%month(9_11,30);
%month(9_12,31);

array monthdays month_3_1-month_3_12 month_4_1-month_4_12
    month_5_1-month_5_12 month_6_1-month_6_12
    month_7_1-month_7_12 month_8_1-month_8_12
    month_9_1-month_9_12;
array out days_out_3_1-days_out_3_12 days_out_4_1-days_out_4_12
    days_out_5_1-days_out_5_12 days_out_6_1-days_out_6_12
    days_out_7_1-days_out_7_12 days_out_8_1-days_out_8_12
    days_out_9_1-days_out_9_12;
array covered covered_3_1-covered_3_12 covered_4_1-covered_4_12
    covered_5_1-covered_5_12 covered_6_1-covered_6_12
    covered_7_1-covered_7_12 covered_8_1-covered_8_12
    covered_9_1-covered_9_12;

do i=1 to 84;
    if birth_month=i then do;
        if monthdays(i) > (out(i)+monthdays(i))+1-dob_d then do;
            monthdays(i)=(out(i)+monthdays(i))+1-dob_d;
        end;
        if monthdays(i)=. then monthdays(i)=0;
        covered(i)=(monthdays(i) ge ((out(i)+monthdays(i))+1-dob_d)/2);
        if monthdays(i) in (.,0) then covered(i)=0;
    end;

    if birth_month>i then do;
        covered(i)=.;
    end;

    if ageout_month=i then do;
        if monthdays(i) > dob_d then do;
            monthdays(i)=dob_d;

```

```

        end;
        if monthdays(i)=. then monthdays(i)=0;
        covered(i)=(monthdays(i) ge dob_d/2);
        if monthdays(i) in (.,0) then covered(i)=0;
    end;

    if ageout_month<i then do;
        covered(i)=.;
    end;
end;

eligible=0;

do j=1 to 84;
    if monthdays(j)>0 then eligible=1;
end;

if eligible=1;

drop j;
run;

data full_allstates;
    set allstates;

    eligible=0;
    first_entry=.;

    array elig any_days_6_7-any_days_6_12 any_days_7_1-any_days_7_12
        any_days_8_1-any_days_8_12 any_days_9_1-any_days_9_6;
    do i=1 to 36;
        if elig(i)>0 then do;
            eligible=1;
            if first_entry=. then do;
                first_entry=i;
            end;
        end;
    end;

    if eligible=1 then output;
    else delete;
run;

```

```

data full_allstates;
    set full_allstates;

    array burn covered_6_7-covered_6_12 covered_7_1-covered_7_12;
    array main covered_8_1-covered_8_12 covered_9_1-covered_9_6;

    coverage_den=18;

    ageout_stop=.;

    if 19 le first_entry le 36 then do;
        coverage_den=18-(first_entry-18)+1;
    end;

    do k=1;
        if main(k)=. and first_entry < 19 then do;
            coverage_den=.;
        end;
    end;

    do k=2 to 18;
        if main(k)=. and main(k-1)^=. then do;
            ageout_stop=k-1;
            coverage_den=k-1;
            if 19 le first_entry le 36 then do;
                coverage_den=19-(first_entry-18)-(18-(k-1));
            end;
        end;
    end;

    do l=2 to 18;
        if burn(l)=. and burn(l-1)^=. then do;
            coverage_den=.;
        end;
    end;

run;

data full_allstates;
    set full_allstates;

    coverage_num=sum(of covered_8_1-covered_8_12 covered_9_1-covered_9_6);

```

```
if coverage_num=. then coverage_num=0;
if coverage_den^ in (.,0) then do;
    coverage_pe=coverage_num/coverage_den;
end;
run;
```