

MORTALITY ASSOCIATED WITH HEAT WAVE CONDITIONS IN THE  
MELBOURNE METROPOLITAN AREA, JANUARY AND FEBRUARY 1959

by D.W.Rankin

State Department of Health,  
Melbourne, Victoria

(Manuscript received August 1959)

During January and February of this year, 145 persons, most of them elderly, died in the Melbourne Metropolitan Area from causes related to heat wave conditions.

This figure is in marked contrast to previous years, when deaths from excessive heat have been negligible.

There were two periods of excessive heat during January and February; the first was from January 9th to 25th, during which time the maximum daily Effective Temperature\* fell below 72°F on only two days.

A second period of equally high Effective Temperature occurred from January 31st to February 2nd.

For the 10 year period 1950-59, inclusive, the average maximum daily Effective Temperature was 72°F for the months of January and February.

A histogram of a total of 145 deaths in two day intervals registered in the Metropolitan Area of Melbourne associated with heat wave conditions January to February 1959 compared with daily maximum

\*For the purposes of this study the Effective Temperature was calculated from the formula:

$$ET = 0.4 (\text{Dry Bulb Temp} + \text{Wet Bulb Temp}) + 15,$$

assuming zero air movement.

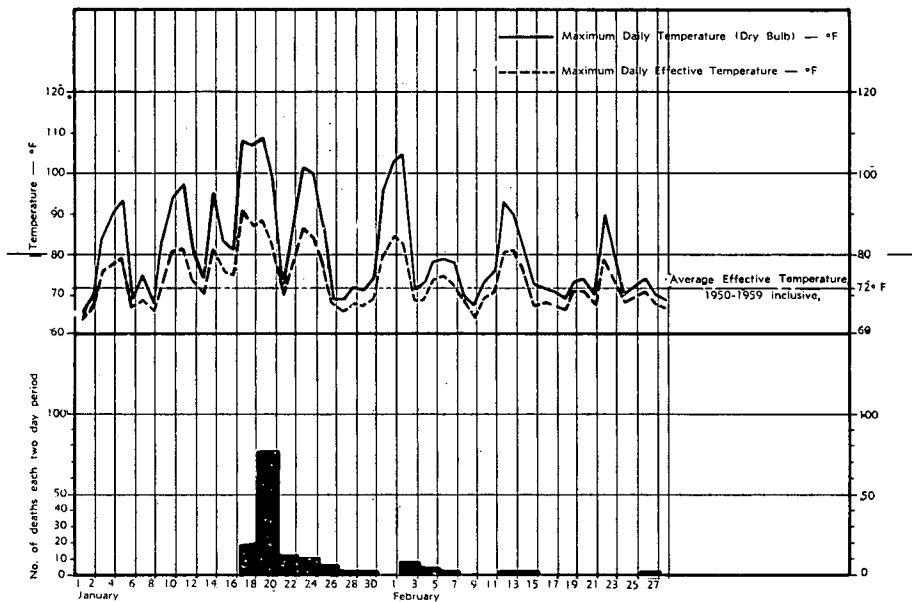


Fig. 1. Histogram showing total of 145 deaths in two day intervals registered in metropolitan area of Melbourne associated with heat wave conditions January-February 1959 compared with Daily Maximum Temperature, Dry Bulb and Daily Effective Temperature.

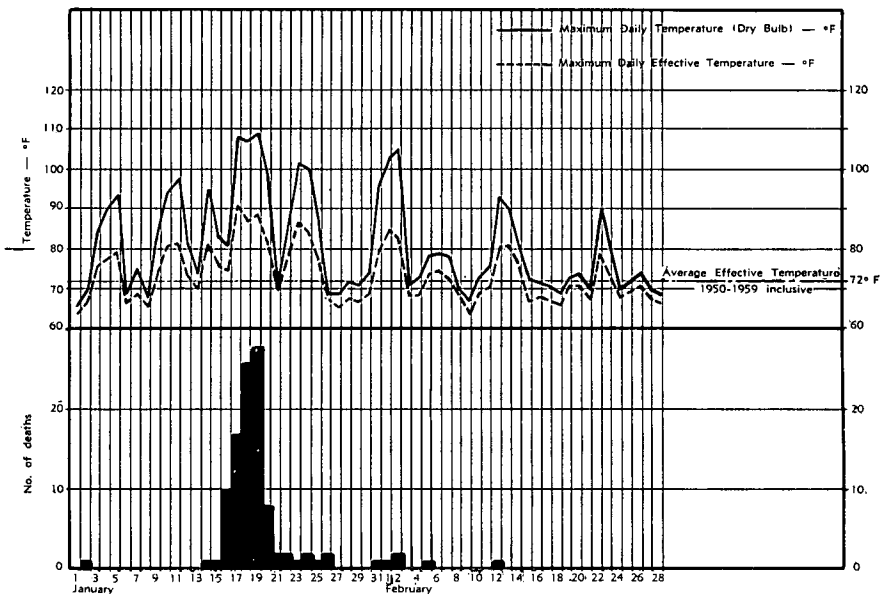


Fig. 2. Histogram of 108 deaths registered in metropolitan area associated with heat wave conditions January-February 1959 to show relation between date of onset of symptoms of Terminal Illness and Maximum Dry Bulb Temperature and Effective Temperature.

dry bulb temperature and effective temperature is shown in Fig. 1. A histogram of 108 deaths registered in the Metropolitan Area associated with heat wave conditions January to February 1959 giving relation between date of onset of symptoms of terminal illness and daily maximum dry bulb temperature and effective temperature is shown in Fig. 2.

It is of interest to note that most of the fatal illnesses began in the first period and here, also, most of the deaths related to heat wave conditions occurred.

Very few of the deaths occurred in the second period, suggesting that the susceptible persons in the community had already succumbed by this time.

The figures for this study were kindly supplied by the Bureau of Meteorology, Melbourne.