
A BILL FOR AN ACT

RELATING TO EMERGENCY MEDICAL SERVICES.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that time is of the
2 essence for heart attack patients because irreversible or
3 potentially fatal damage to the heart can occur quickly. An
4 estimated 1,200,000 individuals experience heart attacks
5 annually, resulting in 495,000 deaths. Studies have shown that
6 when a heart attack is caused by a blood clot blocking a
7 patient's artery, clearing the vessel within ninety minutes
8 reduces the risk of death by forty per cent. However, a heart
9 attack patient en route to an emergency room often suffers
10 unnecessary but deadly delay in receiving appropriate treatment
11 because official diagnosis normally is not made until the
12 patient actually arrives at the emergency room and a
13 cardiologist is summoned to make the diagnosis.

14 The legislature further finds that hospitals in North
15 Caroline and Arkansas have taken steps to shorten these deadly
16 delays by having paramedics wirelessly transmit patients'
17 electrocardiogram data from the field or in ambulances either
18 directly to cardiologist staff or to staff in waiting emergency



1 rooms. Electrocardiograms measure the electrical activity of
2 the heart and can show signs of damage to the heart muscle as it
3 is occurring. Under the wireless transmission system,
4 paramedics in the field detecting signs of a heart attack
5 transmit electrocardiogram readings by means of a wireless modem
6 to a cardiologist at an emergency room. This helps to hasten
7 the diagnosis so that the cardiologist can mobilize the
8 appropriate staff and equipment prior to the heart attack
9 patient's arrival. These wireless transmissions can be sent
10 either to a fixed station in an emergency room or directly to a
11 cardiologist through a mobile handheld receiver. The wireless
12 transmission system in North Carolina has reportedly reduced the
13 time for patients to receive appropriate lifesaving treatment by
14 more than one hour compared to the national average. The time
15 elapsed for each patient from arrival at the hospital to
16 receiving treatment ranged from twenty-seven to thirty-five
17 minutes as opposed to the national average of one hundred to one
18 hundred five minutes.

19 The purpose of this Act is to provide for a two-year pilot
20 project to implement wireless electrocardiogram data
21 transmission by paramedics in the field or in ambulances either



1 to staff at fixed receiving stations in hospital emergency rooms
2 or to cardiologists using mobile receivers.

3 SECTION 2. **Wireless transmission of electrocardiogram**

4 **data; two-year pilot project on Oahu; equipment; funding;**

5 **report.** (a) The department of health shall establish a two-
6 year pilot project to implement wireless electrocardiogram data
7 transmission by paramedics in the field or in ambulances either
8 to staff at fixed receiving stations in hospital emergency rooms
9 or to cardiologists using mobile receivers. The project shall
10 include the equipping of ambulances on the island of Oahu with
11 the appropriate transmission equipment such as the cardiac
12 action life link, which is used in Arkansas and was developed by
13 Verizon Wireless and Metropolitan Emergency Medical Services, an
14 ambulance operator in Arkansas, or similar equipment.

15 (b) The pilot project shall be funded from the emergency
16 medical services special fund established pursuant to section
17 321-234, Hawaii Revised Statutes.

18 (c) The director of health shall submit written interim
19 and final reports of findings and recommendations, including any
20 necessary proposed legislation, concerning the operation of the
21 pilot project to the legislature no later than December 15,
22 2008, and December 15, 2009.



1 (d) The pilot project shall terminate on June 30, 2009.

2 SECTION 3. There is appropriated out of the emergency
3 medical services special fund the sum of \$ or so much
4 thereof as may be necessary for fiscal year 2008-2009 for the
5 wireless electrocardiogram data transmission pilot project on
6 Oahu.

7 The sum appropriated shall be expended by the department of
8 health for the purposes of this Act.

9 SECTION 4. This Act shall take effect upon its approval,
10 except that section 3 shall take effect on July 1, 2008.

11

INTRODUCED BY:

John M. Papanicolaou
Cynthia Hocken
Mary B. Bee
Ken E. ...
Ken Ward
Subaru Yamamoto
Colleen Murphy
[Signature]



Report Title:

Wireless Electrocardiogram Data Transmission; Pilot Project

Description:

Requires department of health to establish a 2-year pilot project on Oahu to equip paramedics to transmit electrocardiogram data in the field or in ambulances directly to a hospital's emergency room or to a cardiologist prior a cardiac patient's arrival at an emergency room. Makes appropriation from the emergency medical services special fund.

