

# **REMOTE BP MONITORING IN THE ELDERLY PART II: IMPACT ON BP CONTROL**

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# OBJECTIVES

- Acceptance of technology by elderly
- Acceptance of technology by staff
- Impact of E-monitoring on resident outcome

# METHODS I

- Résidence Sacré-Coeur
- September 1, 2003 to February 28, 2004
- 14 elderly Sisters: 76 – 94 y.o.
- March Networks Technology

# METHODS II

- Prospective study
- Compare BP Outcomes of 7 elderly monitored by remote technology to 7 controls
- Compare medication changes between experimentals and controls

# RESULTS I: START OF TRIAL

|                          | <b>Experimental</b> | <b>Control</b>      |
|--------------------------|---------------------|---------------------|
| <b>Number</b>            | <b>7</b>            | <b>7</b>            |
| <b>Average Age</b>       | <b>88.4 (83-94)</b> | <b>86.7 (76-94)</b> |
| <b>Years of high BP</b>  | <b>20.1 (11-29)</b> | <b>17.7 (4-28)</b>  |
| <b># Cardiac History</b> | <b>6</b>            | <b>4</b>            |
| <b># Vascular Family</b> | <b>6</b>            | <b>6</b>            |
| <b># Meds @ start</b>    | <b>8.9 (5-12)</b>   | <b>6.3 (4-10)</b>   |
| <b># Card Meds start</b> | <b>3.9 (3-5)</b>    | <b>2.6 (1-5)</b>    |

# RESULTS II: BP COMPARISONS

|                       | <b>Exp</b>  |              | <b>Contro<br/>I</b> |              |
|-----------------------|-------------|--------------|---------------------|--------------|
|                       | <b>Syst</b> | <b>Diast</b> | <b>Syst</b>         | <b>Diast</b> |
| <b>Start of trial</b> | <b>122</b>  | <b>62</b>    | <b>139</b>          | <b>64</b>    |
| <b>End of trial</b>   | <b>132</b>  | <b>62</b>    | <b>135</b>          | <b>65</b>    |

# RESULTS III: MED CHANGES

|                           | <b>Experimental</b> | <b>Control</b>    |
|---------------------------|---------------------|-------------------|
| <b>Total # BPs (Ave.)</b> | <b>570 (81.4)</b>   | <b>165 (23.6)</b> |
| <b>Total Meds 03</b>      | <b>8.9 (7-12)</b>   | <b>6.3 (4-10)</b> |
| <b>Total Meds 04</b>      | <b>8.9 (5-11)</b>   | <b>7.3 (4-13)</b> |
| <b>Cardiac Meds 03</b>    | <b>3.9 (3-5)</b>    | <b>2.6 (1-5)</b>  |
| <b>Cardiac Meds 04</b>    | <b>3.7 (3-5)</b>    | <b>3.1 (1-6)</b>  |
| <b>Days Cardiac Ch.</b>   | <b>5 (n=3)</b>      | <b>7 (n=4)</b>    |
| <b># Cardiac Ch.</b>      | <b>7</b>            | <b>10</b>         |

# RESULTS IV

- **Experimental:** the 2 patients with the highest number of readings had **no** cardiac med changes.
- **Control:** the 2 patients with the highest number of readings had the **largest number** of med changes.

# RESULTS V

- Nurses were very satisfied with the technology, but...
- ...whenever there was an abnormal reading they verified with a manual machine.
- The principal physician, who was informed about the trial, forgot about it and was not aware if BPs were manual or electronic.

# DISCUSSION

- Nurses and residents enjoyed the technology.
- The physician was unaware.
- Having more readings did not result in lowering BP, nor in more medication changes:
- Does having more BP readings taken “protect” against medication changes?