

## Social Network Analysis (SNA)

At the end of the program (July 31, 2013), UAB conducted an online survey among our 11 CHWs to inform a social network analysis describing how relationships formed and grew over the course of the CPH CARES About Heart Health Project. Each CHW was asked to complete the online survey and rate their relationships with each of the other CHWs and pastors of each of the participating churches on a scale of 0 (no relationship) to 4 (strong relationship) both before and after participating in the project.

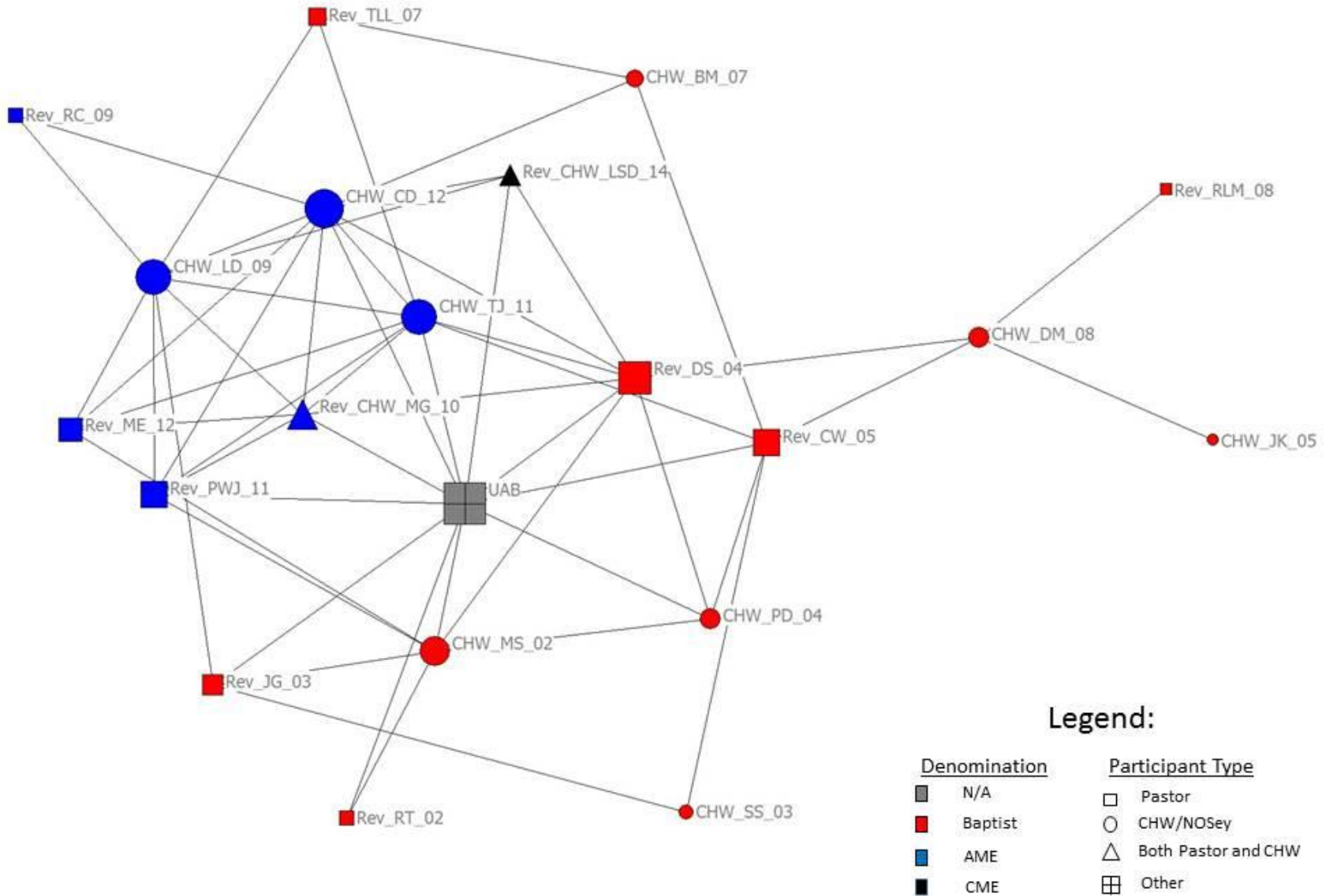
The responses were then placed into a matrices (one before and one after) and analyzed using UCI-Net 14 software, which was used to create graphical depictions of the relationships. Participant names were de-identified and given codes including the participant type (Pastor (Rev.), CHW, or both), the participant's initials, and the 2-digit identification number assigned to their church in our data collection to show which pastors were connected to which CHWs. As part of the analysis, the relative size of the nodes depicting each participant increase in size based on the degree of connectedness (number and strength of relationships). We also modified the color of the nodes to identify denomination (we had participation from Baptist, African Methodist Episcopal (AME), and Christian Methodist Episcopal (CME) churches), and the shape of the nodes to identify whether the participant represented their congregation as a pastor, CHW, or both. A legend is included on each diagram.

One limitation of our SNA is that we did not solicit information from the pastors, only the CHWs (except in cases where the CHW was also the pastor), so we were not able to depict the relationships among the pastors. As a result there are key relationships not depicted in both our pre-and post- diagrams. In particular, Reverend Solomon, who was integral in helping us with recruitment for the initiative appears to be far less central than he was. It should be noted, however, that the relationships not depicted are consistent between pre- and post-test, therefore the relationships that are depicted are not impacted by this limitation, and an equal number of relationships are missing from both before and after diagrams.

In addition, we had one CHW from our first phase that did not participate in the survey. However, since others were able to provide ratings of their relationship with her before and after the project, to our knowledge, the only relationship that is not depicted is that between her and her pastor.

The diagrams are provided on the following pages. It should be noted that CHW\_PD\_04 represents Patricia Dick, who was listed in our proposal as being central to assisting us with recruitment, and the "After" diagram indicates the central role she played in the project. Reverend Solomon is Rev\_DS\_04, and is also fairly central despite his relationships with the other pastors not being depicted. However, with Patricia being the CHW for Reverend Solomon's church, it is clear in the diagrams that the two of them as a team played the central role in recruitment and relationship building for this project, as we intended. It is also clear from the before and after diagrams that a number of new relationships were formed and there is a far more defined and cohesive network following the initiative.

## Before CPH CARES About Heart Health Project (March 2012)



## After CPH CARES About Heart Health Project (August 2013)

