## Supplementary Table 1. Quality Appraisal and Methodological Descriptions of Included Studies (n=49)

| Author<br>(Study<br>Setting) | Quality<br>Rank<br>L/M/H | Main Strengths (+) and Weaknesses (-)  | Method/s | Sampling<br>Strategy      | Sample<br>Pt, HP, Cg<br>(Male/Female) | Mean<br>Age<br>and/or<br>Range<br>(sex) |
|------------------------------|--------------------------|--|----------|---------------------------|---------------------------------------|---|
| Bennett [71] (USA)           | M                        | <ul> <li>+ Congruity between research methodology, data analysis, and interpretation of results; detailed description of analysis procedures</li> <li>- Did not provide sufficient sample characteristics (NYHA class, age range); difficult to assess the generalizability of the analyses</li> </ul> | FG       | Convenience               | 23 Pt (16/7)<br>18 Cg (17/1)          | 60 Pt<br>only                           |
| Boren [57] (USA)             | Н                        | <ul> <li>+ Congruity between research methodology and interpretation of results; strong grounded theory approach</li> <li>- Discusses data collected in the study data but also data collected within the author's nurse practice</li> </ul>   | SSI      | Convenience               | 15 Pt (0/15)                          | 28-76                                   |
| Buetow [50] (New Zealand)    | L                        | <ul> <li>+ Data analysis procedures are well-described; large sample size</li> <li>- Difficult to generalize results; lacks description of sample and rationale for sampling strategy</li> </ul>   | SSI      | Convenience               | 62 Pt (NR)                            | NR                                      |
| Clark [72]<br>(UK)           | M                        | + Congruity between the research questions and research design; study participants are adequately represented; quote identifiers are used - Limited information on data analysis, researcher position, caregiver demographics  | SSI      | Convenience;<br>purposive | 50 Pt (33/17)<br>30 Cg (NR)           | 68 (F); 67<br>(M)<br>Pt only            |
| Clark [19]<br>(UK)           | Н                        | <ul> <li>+ Congruity between the research questions and research design; representative use of quotes as quote identifiers are used</li> <li>- Focus is on the description of patients although caregivers are focus of the study</li> </ul>   | SSI      | Convenience               | 30 Cg (7/23)<br>50 Pt (33/17)         | 68 (F); 67<br>(M)                       |
| Clark [37]<br>(Canada)       | Н                        | <ul> <li>+ Congruity between research methodology and methods;</li> <li>participants are adequately represented</li> <li>- Age of caregivers in sample is not clear</li> </ul>   | SSI      | Convenience; quota        | 42 Pt (27/15)<br>30 Cg (NR)           | 76 Pt<br>only                           |
| Costello [35]<br>(Canada)    | M                        | +Congruity between research methods and data collection procedures; analysis done by two researchers - Small sample size; analysis and interpretation of results   | SSI      | Purposive                 | 6 Pt (3/3)<br>6 Cg (NR)               | 30-73                                   |

|                        |   | appear superficial   |                |   |                          |               |
|------------------------|---|--|----------------|---|--------------------------|---------------|
| Dickson [49]<br>(NR)   | M | <ul> <li>+ Congruity between conceptual basis for study, research methodology, theoretical framework and interview methods</li> <li>-Sample may be too small to draw conclusions about typology; analysis procedures described but not illustrated</li> </ul>          | SSI            | Purposive for<br>NYHA II or III,<br>younger age | 41 Pt (26/15)            | 25-65         |
| Dickson [29] (NR)      | M | +Clear conceptual basis for study; integration of qualitative and quantitative findings - Small sample size limits strength of quantitative evidence; sample predominantly white, male   | SSI;<br>survey | Purposive                                       | 41 Pt (26/15)            | 49<br>25-65   |
| Dickson [40] (USA)     | Н | +Congruity between research methodology and interpretation of results; detailed description analysis procedures and data triangulation through mixed-methods design - Sample is likely too small to generalize quantitative results                                    | SSI;<br>survey | Purposive                                       | 41 Pt (26/15)            | 49<br>25-65   |
| Dickson [62] (USA)     | M | +Congruity between research methodology and methods; detailed description of data integration and triangulation; use of a theory-driven interview guide - Lack of researcher reflexivity; very few sample interview questions provided                                 | SSI;<br>survey | Purposive                                       | 30 Pt (18/12)            | 59.6<br>26-98 |
| Falk [70]<br>(Sweden)  | M | +Clear description of data analysis; provides sample data for all main categories - Interview questions not provided; illustrative quotes are sometimes rather mundane   | SSI            | Purposive                                       | 17 Pt (12/5)             | 72<br>55-83   |
| Gary [53]<br>(USA)     | M | <ul> <li>+ Theoretical framework informs interview questions;</li> <li>provides quotes and frequency counts for each topic</li> <li>- Interview guide may limit qualitative data generation;</li> <li>unclear how representative the data are of the sample</li> </ul> | SSI            | Convenience                                     | 32 Pt (0/32)             | 68            |
| Glassman [69]<br>(USA) | M | +Detailed systematic research approach; use of independent auditor to verify transcripts - Small sample; quotes appear to draw from few participants; data seems repetitive  | UI             | Convenience;<br>purposive                       | 5 Pt (3/2)               | 77.2<br>60-85 |
| Granger [28]<br>(USA)  | M | +Congruity between theoretical framework and interview guide and approach to analysis; unique focus on patient-physician dyads - Findings appear to be congruent with data collection and analysis, yet there is little patient data to substantiate                   | SSI            | Purposive                                       | 6 Pt (5/1)<br>6 HP (3/3) | 58 Pt<br>only |

|                                       |   | results  |                               |                                       |  |                    |
|---------------------------------------|---|--|-------------------------------|---------------------------------------|--|--------------------|
| Helleso [75]<br>(Norway)              | M | <ul> <li>+ Basic interpretive descriptive approach; rationale for data collection approach</li> <li>- Sample not well described; quote identifiers not used; themes appear superficial</li> </ul>  | SSI                           | Convenience                           | 14 Pt (6/8)                                    | 79.6<br>71-93      |
| Horowitz [38]<br>(USA)                | Н | <ul> <li>+ Robust theoretical framework; rigorous sampling methods; detailed description of analysis and sample characteristics; recommendations and conclusions appear to flow from the interpretation of the data</li> <li>- None identified</li> </ul>  | SSI                           | Purposive                             | 19 Pt (10/9)                                   | 52-89              |
| Hoyt [73]<br>(USA)                    | Н | +Congruity between iterative research process and creative approach to analysis; patient demographics are well described - Sampling appears to be convenience not purposive  | SSI                           | Convenience                           | 11 Pt (5/6)                                    | 67<br>50-81        |
| Jowsey [48]<br>(Australia)            | L | +Sample includes patients, caregivers, and health professionals; congruity in the interpretation of findings through a policy lens - Insufficient information on participant age; not all of the findings are HF-specific, may affect transferability of findings  | SSI;<br>survey                | Purposive for age, medical conditions | 52 Pt (28/24)<br>14 Cg (1/13)<br>63 HP (19/44) | NR                 |
| Jurgens [39] (USA)                    | L | +Congruity between methodology and mixed-methods used to collect data - Participants are not adequately represented (limited qualitative data presented), small sample size limits generalizability of the quantitative data   | SSI                           | Convenience                           | 77 Pt (40/37)                                  | 75.9               |
| Kaholokula [51]<br>(USA)              | L | <ul> <li>+ Focus on ethnic minority groups living with HF;</li> <li>rationale for use of theoretical model</li> <li>- Findings/discussion does not adequately represent caregiver participants; does not adequately describe sample (NYHA class, age range), research questions not stated; does not report ethical approval of the study</li> </ul> | FG                            | Convenience                           | 11 Pt (5/6)<br>25 Cg (4/21)                    | 65.9 Pt<br>50.5 Cջ |
| Lough [47] (NR)                       | M | +Congruity between the methodology and data analysis;<br>novel conceptualization of HF self-care as work<br>- Researcher position not stated   | SSI                           | Purposive                             | 25 Pt (12/13)                                  | 71<br>66-91        |
| Macabasco-<br>O'Connell [32]<br>(USA) | L | +Focus on under-served population (low income patients) - Lacks discussion on the approach to integrating results of the mixed-methods approach; participants do not appear to be adequately represented (insufficient use of  | Structured interviews; survey | Convenience                           | 65 Pt (29/36)                                  | 59                 |

|                             |   | quotes from participants)   |                                 |                           |  |                          |
|-----------------------------|---|---|---------------------------------|---------------------------|--|--------------------------|
| Mahoney [42] (USA)          | M | +Congruity between methods and analysis of data; participants selected from multiple sites; use of a pilot study; - Conclusions appear somewhat simplistic  | SSI                             | Purposive                 | 16 Pt (12/4)<br>12 Cg (NR)                   | 67.7 Pt<br>only          |
| Mead [34] (USA)             | M | +Congruity between research questions and data collection methods; very large sample size; patients recruited from multiple sites; participants are adequately represented in the data through illustrative quotes - Lack of age or sex-based descriptive analysis              | FG                              | Convenience;<br>purposive | 387 Pt (84/198:<br>105 sex not<br>described) | 41% ≥ 65                 |
| Meyerson [31] (USA)         | M | +Research design and overall study is well described -Conclusions/findings are based on anecdotal records written during an HF self-care intervention; the study would likely be more rigorous if interviews had been conducted with patients to triangulate the case note data | Written<br>anecdotal<br>records | Convenience               | 27 Pt (NR)                                   | 75                       |
| Ming [65] (Malaysia)        | M | +Sufficient description of sample; patients appear to be adequately represented (via use of supporting quotes from participants) -Theoretical basis not described; the interview guide or sample interview questions are not provided   | SSI                             | Purposive                 | 20 Pt (15/5)                                 | 56.5<br>27-75            |
| Reid [67]<br>(UK)           | Н | +Congruity between the research methodology and data collection methods; large sample size -Patients recruited from outpatient HF clinics (these patients may already be receiving support for medication management)   | SSI                             | Convenience               | 50 Pt (33/17)<br>29 Cg                       | 67.1<br>41-80<br>Pt only |
| Rerkluenrit [33] (Thailand) | M | +Congruity between grounded theory approach and data collection and analysis methods; participants are adequately represented; good use of illustrative quotes -Despite use of grounded theory approach authors do not identify a core variable                                 | SSI                             | Purposive;<br>theoretical | 35 Pt (19/16)                                | NR                       |
| Riegel [54] (USA)           | M | +Basic interpretive descriptive design and approach to analysis -Unsure about rigour of qualitative design; minimal description or interpretation of quotes provided for themes   | Structured interviews; FG       | Convenience               | 26 Pt (17/9)                                 | 74.4<br>59-91            |
| Riegel [55] (USA)           | Н | +Congruity between mixed-methods approach and integration and interpretation of qualitative and quantitative data -Results obtained during intervention sessions  | Face-to-face intervention       | Convenience               | 15 Pt (6/9)                                  | 59.7                     |

| Riegel [36] (USA)        | Н | + Congruent methodology, data analysis and interpretation of results; theory driven purposive sampling - Lacks information on age and number of participants in NYHA class III or IV  | Structured interviews | Theoretical | 29 Pt (18/11)            | NR              |
|--------------------------|---|---|-----------------------|-------------|--------------------------|-----------------|
| Riegel [46] (Australia)  | M | +Congruity in mixed-methods design and triangulation of qualitative and quantitative data -Participants are not adequately represented in results (limited use of quotes)   | SSI                   | Purposive   | 29 Pt (21/8)             | 68.7            |
| Riegel [56] (Australia)  | M | +Congruity in mixed-methods approach; detailed steps indicate rigorous design -Low proportion of women in sample; qualitative themes appear to draw upon quantitative results   | SSI                   | Purposive   | 27 Pt (19/8)             | 68.7<br>35-94   |
| Sanford [63]<br>(USA)    | M | +Participants were recruited from multiple sites; use of quote identifiers suggests that participants are adequately represented the results / findings -Use of unstructured interviews   | UI                    | Convenience | 20 Cg (5/15)             | NR              |
| Schnell [66]<br>(Canada) | L | +Inclusion of ethnic minority groups; data analysis and report of findings is theoretically guided -The small convenience sample is inadequately described; interview guide not validated / piloted and appears superficial; coding/analysis appears to lack rigour | SSI                   | Convenience | 11 Pt (7/4)              | 64<br>43-79     |
| Scott [64] (USA)         | M | +Congruity in research methods, questions, data analysis, and interpretation of results -Study is more quantitative than qualitative; researcher position not stated  | SSI                   | Convenience | 20 Pt (NR)<br>18 Cg (NR) | 71.3 Cg<br>only |
| Scotto [52] (USA)        | L | +Congruity between research methods and research questions -Analysis appears superficial; themes appear to reflect nursing theory, not data; purports to be phenomenology but the process followed is generic interpretive descriptive                              | SSI                   | Convenience | 14 Pt (9/5)              | 63<br>42-84     |
| Scotto [45] (USA)        | Н | +Congruity in methodological approach; clear conceptualization of self-care and sampling rationale - None identified  | SSI                   | Convenience | 14 Pt (9/5)              | 63<br>42-84     |
| Seto [41]<br>(Canada)    | L | +Provides sample interview questions and detailed demographic characteristics of participants -Interviews may lack depth given their very short duration; no details on qualitative data analysis; no details on triangulation of quantitative and qualitative data | Survey;<br>SSI        | Convenience | 94 Pt (74/20)            | 54.6            |

| Sloan [30]<br>(USA)            | Н | +Focus on cognitive impairment is unique; congruity between theoretical/philosophical perspectives and data analysis - Sample is literate and socially supported, findings may not be representative of larger population                     | SSI                              | Purposive                                    | 12 Pt (10/2) | 43-81         |
|--------------------------------|---|---|----------------------------------|--|--------------|---------------|
| Stromberg [74] (Sweden)        | Н | +Congruity between methodology and data collection methods -Interview questions use sophisticated language which may not be understood by participants; superficial examples might have more complex interpretations                          | SSI                              | Purposive                                    | 25 Pt (17/8) | 46-93         |
| Stull [43] (USA)               | M | +Congruity between theoretical framework (interactionist perspective) and data analysis and interpretation -Triangulation of data in analysis is not apparent   | SSI                              | Convenience                                  | 21 Pt (17/4) | 61<br>29-79   |
| Thornton [61] (USA)            | M | +Appears rigorous (peer debriefing, use of an audit trail), provides interview guide; researcher position and reflexivity apparent -Unclear how participants were originally recruited in parent study  | SSI                              | Convenience<br>(from parent study<br>sample) | 7 Cg (0/7)   | 45<br>39-52   |
| van der Wal [44] (Netherlands) | M | +Identifies specific, practical issues into supporting self-<br>care -The term 'compliance' is dated (addressed by authors),<br>but may influence approaches to data collection and/or<br>analysis; themes seem to overlap and are very broad | SSI                              | Purposive                                    | 15 Pt (9/6)  | 70<br>42-83   |
| Weierbach [59]<br>(USA)        | M | <ul> <li>+ Congruity in research methods, research questions, data analysis, and interpretation of results</li> <li>-Discussion is brief and appears superficial</li> </ul>   | SSI;<br>Case note<br>review      | Convenience                                  | 20 Pt (9/11) | 74.6<br>65-90 |
| Wu [60]<br>(USA)               | L | +Basic interpretive descriptive approach; participants are adequately represented in the results -Interview guide is specific and directed; themes appear simplistic  | SSI;<br>structured<br>interviews | Convenience;<br>purposive                    | 16 Pt (9/7)  | 60.4<br>41-84 |
| Wu [68]<br>(USA)               | M | +Clear description of sample and methods; conclusions appear to flow from the analysis / interpretation of data -Limited description of setting and recruitment strategies; reliance on convenience sampling                                  | SSI                              | Convenience                                  | 16 Pt (9/7)  | 60.4<br>41-84 |
| Zambroski [58]<br>(USA)        | Н | +Congruity in research methodology, methods, and data analysis; strong rationale for creative use of metaphor; participants are adequately represented; use of illustrative quotes to support themes; participants recruited from             | SSI                              | Purposive                                    | 11 Pt (5/6)  | 67            |

multiple sites
- Several interview questions provided but entire interview guide not included

Cg = Caregiver; F = Female; FG = Focus Group; HP = Health Professional; M= Male; NR = Not Reported; Pt = Patient; SSI = Semi-Structured Interviews; UI = Unstructured Interviews