Supplementary material 1: Survey items

Work engagement was measured using the three-item "motivation" section of the NHS staff survey (ww.nhsstaffsurveys.com), which is itself a brief version of the Utrecht Work Engagement Scale (UWES-9). Responses were given on a five option frequency scale, scored from 1 "Never" to 5 "Always". An example item is "I am enthusiastic about my job".

Psychological wellbeing was measured via the 12-item version of the General Health Questionnaire (GHQ-12).² The GHQ-12 is a widely used and well validated measure against the DSM-IV criteria for depression and anxiety. Each item has four possible response options; for example, the item "Have you recently (over the past month) been able to concentrate on whatever you're doing?" has the response options "Better than usual", "Same as usual", "Less than usual" and "Much less than usual". There are two different scoring methods for the GHQ-12. In the "Likert" version each item is scored between one and four (four representing the most negative scenario), and an average score across all 12 items calculated. In the binary "caseness" version, the number of items where the response was amongst the two worst categories was calculated. If there were four or more items where this was true, then the respondent was said to be a "case" – that is, they are considered to be in sufficiently poor psychological health that they would benefit from professional intervention (a measure that was validated by).³

Self-reflection was measured via a six-item subscale of Grant, Frankliln and Langford's⁴ scale on self-reflection and insight. The subscale name was "self-reflection", and responses were made on a seven-point Likert-type scale ranging from 1 "Strongly disagree" to 7 "Strongly agree". An example item is "I frequently take time to reflect on my thoughts".

Empathy was measured via the Empathy Quotient measure⁵. This is a five-item scale, with four response options ranging from 1 "Strongly disagree" to 4 "Strongly agree". An example item is "I am good at predicting how a patient will feel".

Communication with patients was measured via the communication skills with patients subscale of the Self Efficacy scale⁶, designed for use by healthcare staff. This included eight items, scored from 1 "Not certain at all" to 10 "Quite certain". An example item is "How certain are you that you can successfully encourage patients to talk about their feelings?"

Compassion was measured with the Santa Clara Brief Compassion Scale⁷ in a version adapted to five items⁸. Measuring compassionate love for others and humanity, each item has

seven response options ranging from 1 "Not at all true of me" to 7 "Very true of me". An example item is "I tend to feel compassion for patients, even when I do not know them well".

Peer support was measured with a four-item subscale from a wider tool on job factors⁹. Responses ranged from 1 "Not at all" to 5 "Completely". An example item is "To what extent can you count on your colleagues to back you up at work?".

Organisational climate for support was measured with the four-item support subscale of the Organizational Climate Measure¹⁰, measuring the perceived organisational concern for employee welfare. Responses to each item ranged from 1 "Definitely false" to 4 "Definitely true". An example item is "This organisation tries to look after its employees".

Absenteeism was measured by asking "In total, on how many working days during the last six months have you been absent due to sickness?".

Demographic and other background data measured included age, gender, occupational group, tenure with the organisation, grade, and working hours. In the follow-up questionnaire, rather than being asked all of these again, respondents were asked whether there had been any significant changes to their job role in the last eight months, and if so what these had been.

Respondents were also asked whether they had regular contact, occasional contact, or no contact with patients as part of their job. If they did not have regular contact with patients, they were invited to skip the questions on empathy, communication with patients, and compassion.

(Follow-up survey only) Respondents were asked to indicate how many Schwartz Center Rounds they had attended in the previous eight months. Records were kept of how many Rounds had been held at their site in this time, and from this information the respondent was classified as a regular attender (50% or more of Rounds attended), an irregular attender (at least one Round attended, but fewer than 50%), or a non-attender (no Rounds attended).

(Attenders only, baseline survey) Respondents were asked why they attended Rounds (open text response).

(Attenders only, follow-up survey only) Respondents were asked why they began attending Schwartz Center Rounds (options: "A manager/colleague suggested I attend", "I was interested in a topic", "A friend/team member was presenting", "I saw publicity about it and wanted to find out more", "I heard about it because of the research project", "I was asked to

present", or "Other", with open text response accompanying; respondents could tick as many as applied). They were also asked whether they always managed to attend Schwartz Center Rounds when they would like to, and if not, what barriers prevented them attending (options: "I do not have autonomy over my work schedule", "They occur in a different location from the site in which I am based", "I have moved to an organisation that does not run Rounds", "Announcement of Rounds is at too short notice", "The topics do not seem relevant to me", "The location is not convenient for me", "There is no one to cover my work", "They occur when I am not working", "I am too busy and not able to find the time", "My break is too short", "The time is not convenient", "They conflict with other clinical priorities", "They conflict with other non-clinical priorities", "I am not supported by my line manager to attend", "I have to wait my turn to attend as we rotate attendance amongst the team", or "Other", with open text response accompanying; respondents could tick as many as applied).

(Attenders only, follow-up survey only) Respondents were also asked to say whether when they had attended Rounds, they had done so in their own time; whether they had done so with immediate colleagues; whether they had ever presented at a Round; and whether they contributed to Round discussions. They were also asked to rate the usefulness of Rounds on a scale from 1 "Not at all useful" to 5 "Very useful". An open text box was given for them to indicate why they thought Rounds were useful/not useful.

(Non-attenders only) Respondents were asked for the reason they did not attend Rounds. In the baseline survey possible answers included "I have no interest in attending", "I do not think they would be useful", "I was unaware of what they were", "I am not able to attend at the time they occur", or "Other" (with an option to write in what the reason was). In the follow-up survey these options were expanded to include "They occur when I am not working", "Announcement of Rounds is at too short notice", "I am too busy and not able to find the time", "There is no one to cover my work", "My break is too short", "They conflict with other clinical priorities", "I am not supported by my line manager to attend", "I have to wait my turn to attend as we rotate attendance amongst the team", "I do not have autonomy over my work schedule", "I have no interest in attending", "I do not think they are relevant to my role", "I was unaware of what they were", "I am not able to attend at the time they occur", "I did not think I was invited", "The topics do not seem relevant to me", "They occur in a different location from the site in which I am based", "The location is not convenient for me", "I have moved to an

organisation that does not run Rounds", "or "Other", with open text response accompanying; respondents could tick as many as applied.

References

- 1. Schaufeli WB, Bakker A, Salanova M. The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement* 2006;**66**:701–16.
- 2. Goldberg DP, Gater R, Sartorius N, Ustun TB, Piccinelli M, Gureje O, *et al.* The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychological Medicine* 1997;**27**:191-7. http://dx.doi.org/Doi 10.1017/S0033291796004242
- 3. Hardy GE, Shapiro DA, Haynes CE, Rick JE. Validation of the general health questionnaire-12 using a sample of employees from England's health care services. *Psychological Assessment* 1999;**11**:159-65. http://dx.doi.org/Doi 10.1037//1040-3590.11.2.159
- 4. Grant AM, Franklin J, Langford P. The self-reflection and insight scale: A new measure of private self-consciousness. *Social Behavior and Personality: An International Journal* 2002;**30**:821-35.
- 5. Baron-Cohen S, Wheelwright S. The Empathy Quotient: An Investigation of Adults with Asperger Syndrome or High Functioning Autism, and Normal Sex Differences. *J Autism Dev Disord* 2004;**34**:163-75. http://dx.doi.org/10.1023/B:JADD.0000022607.19833.00
- 6. Parle M, Maguire P, Heaven C. The development of a training model to improve health professionals' skills, self- efficacy and outcome expectancies when communicating with cancer patients. *Social Science & Medicine* 1997;44:231-40. http://dx.doi.org/10.1016/S0277-9536(96)00148-7
- 7. Sprecher S, Fehr B. Compassionate Love for Close Others and Humanity. *Journal of Social and Personal Relationships* 2005;**22**:629-51. http://dx.doi.org/10.1177/0265407505056439
- 8. Hwang J, Plante T, Lackey K. The Development of the Santa Clara Brief Compassion Scale: An Abbreviation of Sprecher and Fehr's Compassionate Love Scale. *Pastoral Psychol* 2008;**56**:421-8. http://dx.doi.org/10.1007/s11089-008-0117-2
- 9. Haynes CE, Wall TD, Bolden RI, Stride C, Rick JE. Measures of perceived work characteristics for health services research: Test of a measurement model and normative data. *British Journal of Health Psychology* 1999;**4**:257-75. http://dx.doi.org/10.1348/135910799168614
- 10. Patterson MG, West MA, Shackleton VJ, Dawson JF, Lawthom R, Maitlis S, *et al.* Validating the organizational climate measure: links to managerial practices, productivity and innovation. *Journal of Organizational Behavior* 2005;**26**:379-408. http://dx.doi.org/10.1002/job.312