**Appendix A**

**IDENTIFICATION OF RISK AREAS AND THE MODIFIED DELPHI PROCESS**

**Design**

The TT was developed in a stepwise manner, in close collaboration with experts with different skills, using 1) literature review and interviews, 2) a five-round modified Delphi process including face-to-face meetings with group discussions, and 3) two RRR tests of the TT before Delphi rounds two and three, respectively. A flowchart of the development and validation process of the home healthcare TT is provided in Figure 1 in the main article.

**Identification of triggers and risk areas**

Initially, the research team identified risk areas in home healthcare based on interviews and literature review. Two focus group interviews were conducted with four physicians and seven registered nurses. The healthcare professionals who participated in the focus group interviews worked together and had similar experiences. Twelve individual interviews were carried out: four with registered nurses, two with physicians, three with licensed practical nurses, two with patients and one with a family caregiver. Individual interviews were chosen because of geographical considerations and the patients’ illnesses. The main interview questions were: “What is your perception of safe care?” and “Do you see any risks in home healthcare?” During the interviews, the healthcare professionals were also asked to read a list of triggers for in-hospital care, remove those that were not suitable and add triggers they thought could be relevant for home healthcare. Content analysis was used for the interviews.

Information on different international and national existing RRR methods in a wide range of settings was compiled and a preliminary set of triggers was constructed. Risk areas were identified by use of interview data and trigger sets and discussed in the research team. This resulted in a springboard for the first Delphi round in the form of a study manual and an initial trigger list including four modules (*Care, Laboratory, Medication,* and *Continuity and transition*) with, in total, 26 triggers representing risk areas, definitions and decision support. The study manual included, for example, AE and no-harm incident descriptions, definitions, and inclusion and exclusion criteria.

**Recruitment of the review teams and Delphi panel**

To test the triggers and collect the clinical professionals’ feedback in a structured manner, review teams were invited through personal contacts or by e-mail via the patient safety network of the Swedish Association of Local Authorities and Regions (SALAR). All review teams interested in participation were included, resulting in ten review teams with a total of 28 clinicians, who also participated as clinical experts in the Delphi panel. The panel consisted of 41 experts in home healthcare, patient safety, RRR methodology and/or TT design (Appendix B, Table B.1). Purposive sampling was used to reflect a wide range of expert areas: clinical professionals (the review teams), the National Board of Health and Welfare, SALAR, researchers, and relevant sections within the Swedish Society of Nursing and the Swedish Medical Association.

**Modified Delphi process**

The Delphi rounds consisted of face-to-face meetings as well as written and oral feedback from the Delphi panel or the review teams. At the face-to-face meetings, each respective trigger was discussed in terms of clinical relevance (i.e., trigger face validity or indicating high-risk/high-volume AEs and/or no-harm incidents), comprehensibility (i.e., readability and comprehensibility of the definitions and descriptions) and utility (i.e., ease of use for local safety measures and quality improvement). Between Delphi rounds, the research group compiled, analysed and revised the triggers, definitions and descriptions that served as decision support. The revised TT was sent to the Delphi panel between rounds, so panel members could discuss, add, change, and remove triggers, reference values, trigger definitions and descriptions, as well as consider if relevant risk areas were covered.

*Delphi rounds 1-2*

At the first meeting, the Delphi panel received an overview of the TT methodology to facilitate the discussions and pilot test of the triggers. Risk areas and proposed triggers were discussed, first in workshops in smaller groups and then with all participants jointly. This process resulted in a TT containing 35 triggers. One trigger was removed (*Transfusion*), ten triggers were added and 13 triggers were slightly renamed.

Two RRR tests were performed. The first was a pilot, in which teams reviewed 60 non-random records using 35 triggers, conducted after the first Delphi round and before the education day. The aim was to test the triggers and the study manual, as well as the feasibility of obtaining correct patient lists via each respective care provider’s patient administrative system. The review teams gave written and/or oral feedback on the triggers after the pilot test and at the education day before the second RRR test was conducted as part of Delphi round 2.

As a result of discussions during the education day, three new triggers were added before the second test: *Pressure ulcer*, *Escape from home/special accommodation* and *Absence of in-depth drug review* (part of Delphi round 2).

In the second test, the review teams reviewed 600 random records using 38 triggers.

*Delphi rounds 3 to 5*

At the end of the second RRR test, the review teams rated each respective trigger for clinical relevance, comprehensibility and utility, respectively, on a 4-point Likert scale (1=low grade, 2=rather low grade, 3=rather high grade, and 4=high grade). The teams could also add written comments regarding the triggers (Delphi round 3).

The research group analysed the data and sorted triggers into four categories (“retain,” “ambiguous,” “merge,” and “remove”) as support for discussions in the Delphi panel. Sorting into categories was based on an overall assessment including each trigger’s AE/no-harm incident outcomes, positive predictive values (PPVs) (cut-off < 50% suggestion for removal) and the respective index scorings (computed from the Likert scale) for clinical relevance, comprehensibility and utility, as well as written comments. The triggers were revised and sent by e-mail to the Delphi panel before the next face-to-face meeting (Delphi round 4).

In the fourth Delphi round, each member of the review teams verbally evaluated the second RRR test, and the Delphi panel discussed the triggers, definitions and descriptions based on clinical relevance, comprehensibility and utility, as well as which triggers could be retained, renamed, removed or merged. The discussions resulted in joint decisions that were compiled by the research group. The revised trigger list, including 23 triggers, was e-mailed to the Delphi panel, after which the fifth and last Delphi round was performed. Following written feedback, final revisions accepted by all members in the Delphi panel were carried out.