Supplementary File 3: Analysis plan using the Framework Method

In this review, we will retrieve data from internet sources and electronic databases. Using the Framework Method, we took a combined approach to analysis, enabling themes to be developed both inductively from the textual statements of websites, documents and research publications, and deductively from existing literature. Regular team meetings will facilitate our critical exploration of the data, discussion of deviant statements and agreement on recurring themes.

Section 1: Familiarisation with the textural data

The familiarisation process is essential to analyse the qualitative data systematically. Our team members will meticulously and repeatedly read each document and literature to become familiar with the whole data set. We will also record the data selection, evaluation, extraction and analysis process. One of our team members will be in charge of dealing with the textural data in Chinese. Data in Chinese language will be translated and interpreted in English.

Section 2: Coding

We will firstly underline the elements of texture data that related to the research objectives and apply the open codes. Codes will be named after the most frequently recurring terms within the same clusters and are not created or imposed by the investigators. This could range from a few words or partial sentences or the sections. For example, we will merge codes and group codes into clusters around similar and interrelated ideas to identify common and stakeholder-specific 'smart' themes in an iterative process until a consensus between at least three of four investigators (ZYY, FKR, SSG and BHC) is reached.

Section 3: Developing a working analytical framework

To form the initial analytical framework, we will adopt the Theoretical Framework (Figure 1) proposed by Golant (2017) to guide the codes development. The meaningful codes will be captured and reduced according to answers to the review questions. If we find a set of emerging codes, our team members will discuss again to make an agreement on it. Then we will refine the final analytical framework.

Section 4: Applying the analytical framework

We will apply the final analytical framework to each eligible document and literature using the software ATLAS.ti8. In practice, one investigator (ZYY) will import documents and literature into ATLAS.ti8 ready for indexing and then systematically go through the texture data to highlight and attach the appropriate codes. We will code and categorise the concepts of smart nursing home, smart technologies, integration of

medical services and acceptability of a smart nursing home. At least two of four investigators (ZYY, FKR, SSG and BHC) will audit and validate this process.

Section 5: Charting data into the framework matrix

Once all the qualitative data has been coded using the final analytical framework, we will summarise the data in a matrix form. As illustrated on the form below, the matrix comprises of one row for each eligible document or literature and one column per code. Then, we will extract texture data using verbatim statement and insert into the corresponding cell in the matrix form.

	Concept of Smart NH	**Smart / Information Technology**	**Function of technology**	**Direct user of technology**	**Medical Services**	**Acceptability**	**Other Emerging Themes/ Codes**
No.1	-	-			-	-	-
No.2	-	-			-	-	-
No.3	-	-			-	-	-
No.4	-	-			-	-	-

NH= nursing home

Section 6: Interpreting the data

Themes will be generated from the data set by reviewing the matrix and deciding the relations within or between the codes. This process will be influenced by review objectives. During the interpretation stage, we will go beyond descriptions towards developing themes which offers the explanations in terms of the definition, concept and criteria of the smart nursing homes, technological feasibility, user experiences and acceptability. The team members will explore and define the themes or sub-themes guided by the Theoretical Framework. The theme generation and development process will be well evaluated to answer review questions.