**Interviewee background:** 30 years old, male, engineering.

**Interview notes:**

Cui: What problems do you have during sleep?

interviewee: I feel uncomfortable with my neck after sleep.

Cui: What kind of pillow do you need?

interviewee: I need a pillow to make my neck feel comfortable during sleep.

Cui: Can you explain in detail?

interviewee: I want a pillow to make me feel cool in summer and warm in winter.

Cui: Do you think it is necessary for a smart pillow to track your sleep pattern and give advice for your best sleep, such as what time go to bed and what time wake up?

Interviewee: I don’t think so. A person need how many hours to sleep mainly depending on his age, that means people of the same age need same hours of sleep. Some people sleep late just because they have to work late or they want to play late. And there are many products can detect your sleep pattern, such as Fitbit.

Cui: Some people especially seniors don’t want to wear some devices during sleep. Do you think we need to design a smart pillow for them to detect their sleep pattern?

Interviewee: I think it is not a problem to wear Fitbit during sleep.

Cui: There is a sudden unexpected death of adolescents and adults, mainly during sleep. Do you need a smart pillow to detect your heart rate and blood pressure during sleep that can contact your family member or dial 911 if there are abnormal with you?

Interviewee: Yes, I need. Because of work and life pressure, some adults died unexpectedly during sleep. Some seniors died suddenly during sleep because of their health. I think it is a good idea to design a smart pillow to detect heart rate and blood pressure.

Cui: If we sell the smart pillow, will you buy?

Interviewee: Sure. But I want the price is below $30.

**Interviewee background:** 35 years old, male, programmer.

**Interview notes:**

Fu: do you or your family have sleep problems?

interviewee: I sleep quite well, but my parents have some problems.

Fu: what are the problems of your parents?

interviewee: Well, you see. My parents are more than 60 years old, and they don’t live with us. Last night, we made a phone call. My mum said my Dad didn’t sleep well recently. He woke up frequently during the night, and didn’t have smooth breath in sleep. So, I’m worried about the health status of my Dad.

Fu: I’m sorry to hear that. By the way, We now have an idea about smart pillow. It could detect the heart rate and blood pressure during sleeping. When it finds abnormity, it would send an alarm or warning to a pre-designed mobile phone.

Interviewee: that sounds good. I’m now looking for some devices to monitor and supervise my Dad’s body condition. If it comes into product, it’s helpful to me.

Fu: What’s more, our smart pillow has a special function – sudden death detection. It’s designed for lonely seniors.

Interviewee: awesome.

Fu: finally, how much would you pay for such smart pillow?

Interviewee: less than $100.

**Interviewee background:** 25 years old, male, student.

**Interview notes:**

Fu: do you have sleep problems?

interviewee: I think so. But recently I have a little sleep.

Fu: why?

interviewee: Ha… for the mid-term examinations, I don’t have enough sleep. But now, I find it difficult for me to get into deep sleep. I don’t know why.

Fu: maybe the mid-tern disrupts your biological clock, and it would be better later. For recovering quickly, do you try some devices to track your sleep status?

interviewee: not yet, any idea?

Fu: Well, we now have an idea about smart pillow. It could detect the heart rate and blood pressure during sleeping. When it finds abnormity, it would send an alarm or warning to a pre-designed mobile phone. Moreover, it’s not only easy to use, but also to track your sleep status and draw the whole picture of your sleeping. So, you could easily find your sleep problems.

interviewee: Interesting. How much would it cost?

Fu: less than $50.

**A1: Male, 62, Engineer**

**A2: Female, 57, House woman**

Q: What’s your most want to get but you can’t find now？

A1: We cardiovascular patients need a product can precisely track heart rate and blood pressure during sleep. Regular smart bands like Fitbit or smart watch like Apple Watch in current market are not that accurate in medical applications at all. Besides that, they are not comfortable in sleep at all. You won't wear them in bed.

A2: It's very dangerous for us cardiovascular patients in sleep, because no one knows if we are in case of emergency. So I want a product to accurately track heart rate and blood pressure in sleep.

Q: What do you usually do now?

A1: As a cardiovascular patients, I have to measure my heart rate and blood pressure at fixed periods to know if my health condition is normal.

A2: I need check my blood every night just before sleep. If blood pressure is abnormal, I may have to be in hospital until my condition is good enough to live away from special care unit.

Q: What do you think about this item you want?

A1: This product must be comfortable enough to not impact his sleep.

A2: I want to get something can track his condition accurately and ask for help when emergency happens in sleep.

Q: How do you feel if there really exists this item?

A1: If something like that less than $1,000 really launches, I would buy it.

A2: I will take it home if it is about $800 - $1,000.