Region Uppsala

Health impact bond

Questions and answers

11 March 2025

1. **Why does Region Uppsala specifically address high blood pressure and ignore other serious medical conditions?**

There are several conditions that need to be met for an initiative to be suitable for financing with external funds through a health impact bond with risk sharing and outcome-based returns. High blood pressure was chosen because the target group is identifiable, there are good opportunities to prevent disease, not least through medication, and the results can be demonstrated relatively quickly.

A number of different health conditions have been analyzed and compared before Region Uppsala made the decision that the health condition to be addressed within the framework of the health bond is hypertension. Hypertension and its underlying and nearby cardiovascular risk factors rarely cause symptoms, but are often discovered when serious sequelae occur, such as stroke and heart attack. According to scientific studies, hypertension is the number one risk factor for death globally. However, up to half of those with hypertension are not aware of their health condition, which is why screening can be a suitable method for detection. In addition, hypertension and its sequelae are some of the medical conditions that cost healthcare the most.

2. **Why does the Region raise external capital for this project? Can the contribution not be made within the ordinary business?**

Healthcare is facing several challenges, both in Sweden and globally, with an aging population, new treatment methods, and the need for new ways to make healthcare more efficient. This implies increased demand on the healthcare system to produce more care, with less resources. Most healthcare resources today go to care for those who are already ill, while a smaller part is spent on preventive measures to reduce the influx of new patients.

A preventive project means an increase in costs in the short term, before the results of the prevention show up as cost reductions as a result of a reduced influx of new disease cases. This cost reduction is also uncertain as the outcomes of a preventive project are always difficult to predict with accuracy. In a health impact bond, the region receives help to finance the short-term increase in costs without having to redistribute resources from other budget items. In addition, the financier shares the risk if the outcome does not create the expected

cost reductions. If the investment does not turn out well, it affects both the repayment amount and interest negatively.

3. What will the money from the bond be used for?

The money will be used to invite approximately 30,000 individuals to undergo screening for high blood pressure and/or related risk factors such as high blood lipids, high kidney levels and high blood sugar. Of these, it is estimated that 15,000 will accept and thus participate in the screening program. By screening 15,000 individuals it is estimated that 9,000 treatments will be initiated. The money will cover all the Region Uppsala's additional costs for invitation, screening and treatment, as well as costs for follow-up and reporting.

If 9,000 treatments are initiated, and if 80% take their prescribed medications, it is estimated that Region Uppsala can avoid 657 serious cardiovascular events (Major Adverse Cardiovascular Events, MACE) including cardiovascular death, as well as non-fatal myocardial infarction, stroke or heart failure.

4. What is the objective of the project? How does Region Uppsala define a "successful project"?

The goal of the project is to initiate 9,000 treatments and that the adherence to medication for these treatments should be at least 80 percent. The number of cardiovascular events avoided as a result of the project is dependent on two factors. The first is the number of initiated treatments, the second is treatment adherence to drug treatment, which (in the project) is defined as the patient having collected at least 80 percent of the prescribed drugs after 6 months.

If Region Uppsala initiates 9,000 treatments, and if 80% take their prescribed medications, it is estimated that roughly 650 serious cardiovascular events and healthcare costs of SEK 160 million can be avoided over a ten-year period.

5. What makes the project different from regular operations? What is the innovation height?

According to scientific studies, hypertension is the health-related risk factor that claims the most lives in the world. Up to half of those with hypertension are not aware of their health condition, which means that there is a potential for detecting hypertension with screening. The project includes three major components: the first is screening, the second is investigation, and the third is medication and follow-up care. For Region Uppsala, the project is a way to test an innovative screening method with high potential to avoid cases of serious cardiovascular disease and death.

The level of innovation in the initiative is to be able to reach a group that usually does not participate in clinical trials or screening, by having most of the screening and sampling take place at home. This is also something that distinguishes the project from ordinary care.

Furthermore, a new type of blood test is used for the patient to do at home. This generates more information about risk factors than blood pressure measurement alone, creating a faster and more cost-effective investigation while providing greater precision in subsequent treatment protocols. Finally, the patients will be monitored remotely, which is also an innovation compared to regular care, where follow-up mainly takes place at a health center. If the project is successful, it could lead to an entirely new screening and treatment protocol for high blood pressure and related cardiovascular risk factors worldwide.

6. **Is it reasonable to call the project preventive considering that everyone who is treated already has high blood pressure and/or other diseases?**

The project is not aimed at preventing high blood pressure or other cardiovascular risk factors. It aims to prevent the serious diseases that result from high blood pressure if it remains untreated. A larger part of the individuals in the project are unaware of their health condition, while a smaller part of the individuals may be aware of their health condition but not have their blood pressure under control. The project is preventive, as many cardiovascular events can be avoided by addressing the health condition and treating with medication.

7. **In socio-economically disadvantaged areas, there are (relatively) fewer people who participate in clinical trials, is there a risk that individuals living in socio-economically disadvantaged areas will be underrepresented in the project?**

In general, it is the case that people with socio-economically disadvantaged conditions participate to a lesser extent in screening programs and clinical trials. At the same time, there is often a higher morbidity in these groups. One of the hopes with this project is therefore that, through a simplified screening process where the individual performs most of the steps at home, we should be able to see a higher proportion of participants from socio-economically disadvantaged groups in society. Thus, the project is also important from an equality perspective.

8. What happens to those in the control group who have high blood pressure?

Those who belong to the control group will be followed in the registry data. These individuals will not be aware that they are part of a control group, and whether the individuals in the control group have high blood pressure or not is unknown. Randomization of individuals and the control group has an extremely important function in verifying the results of the project. The control group enables us to ensure that the outcome of the project depends on the project, and not solely on external factors we cannot control.

Should any of the individuals in the control group be diagnosed with high blood pressure in traditional care, they will of course be offered treatment according to the current protocol. In this way, the control group represents what would otherwise have happened in society, independent of our project.

9. Doesn't the investment take resources from public health care?

The project is carried out separately from regular care and is financed with external funds.

There are also limited crowding-out effects in ordinary care, since a large part of the project takes place remotely with digital support, and a special screening reception is established that does not take resources from other health care provisions.

10. How does this project burden the healthcare system in the region?

The project is carried out separately from regular care and is financed with external funds. Thus, the project should not burden ordinary healthcare in the region.

11. Will the project be scaled up if successful?

A political decision is required before a decision can be made on scaling up the project. If a decision is to be made regarding a broad introduction of the measures, the needs from this project will be compared to other needs. Such a decision also requires that the project has been scientifically evaluated and found to be cost-effective according to the principles of evidence-based medicine.

12. Who bears the cost of the medicine?

The cost of medicine is not included in the project's budget. Parts of the drug costs are instead borne by the individuals themselves within the framework of the high-cost protection, while remaining costs are borne by the state and parts by the region.

13. How have you methodologically handled the risk that a random factor may affect the outcome of the project, that is, that the outcome of the initiated treatments may be affected by an external factor and not by the project itself?

Randomization of people to a screening group and a control group, along with ensuring that the study is large enough, are important tools to minimize the influence of chance and other sources of error. Had these functions not been included in the project, it would have been difficult to demonstrate that the outcome of the project is a consequence of the treatment itself. These are the possible measures that can be taken to control for random factors that may affect the outcome.

14. What happens, after the project ends, with the patients treated in the project?

The patients treated in the operation will continue to be followed up by being referred to their respective primary health centers.

15. How will the project be affected if there is a change of power in the region after the next election?

Region Uppsala has entered into a binding legal agreement with the investor, and the project must continue as planned regardless of a possible change of power at the next election.

16. Will the project be terminated early if it turns out to be very unlikely that the project will succeed?

If it turns out that the response rate is insufficient, the bond will be redeemed early. Lack of response rate means that the response rate is less than or equal to 20 percent of all recipients of the invitation to screening. The control regarding the response rate will be done 18 months after the first invitation to screening was sent.

Covered costs in the project are fixed costs that primarily include personnel costs, variable costs per patient, and a smaller cost item for follow-up of the project. The costs for screening and initiation of treatment are incurred at an even rate during the first 3 years, costs for adjustment of treatment and reminders of treatment are incurred during the first 3.5 years, costs for follow-up are incurred at an even rate during all 5 years.

17. What happens if the budget for this project is insufficient - or if it turns out to that SEK 80 million is more than enough?

Borrowed funds for the project are SEK 80 million, and these borrowed funds cannot be exceeded. Should it turn out that 9,000 treatments can be initiated with less money, more treatments can be initiated if there are resources and time left in the project.

18. How would the project have been financed without a health impact bond? Would the project have been scrapped?

Just like in many other regions, Regions Uppsala's economic situation is strained. Financing a major preventive project like this, with uncertainty and risk linked to the outcome of the project, probably could not have been financed without external funds.

19. Why is the cost savings calculated over 10 years? What happens after 10 years?

The project lasts for 5 years; however, the savings potential is evaluated over 10 years. The latter is the basis for the amount to be paid back to the lender. The effect, in the form of all avoided cardiovascular events, will not occur exclusively within the duration of the project of 5 years, nor during the evaluation period of 10 years. The effects will continue for a long time to come and create lasting positive effects for the individuals as well as for the region. Based on the data that has been collected about the treatments that are initiated, the outcome in year 10 will be modelled.

20. Why does the health impact bond run for just 5 years?

The cost savings are calculated over a 10-year period, while the costs are incurred during the first 5 years. The Swedish bond market for borrowers, such as regions and municipalities, focuses on maturities of up to 5 years, and exceptionally 6 or 7 years. The project is structured in a way that means that the cost saving potential will be determined within 5 years. The parties have therefore agreed to use a maturity that is within the normal range for the Swedish market.

21. How is it that Skandia is the only investor in a health impact bond (again)?

Outcome-based health impact bonds are a relatively new product on the financial market. Against the background of the short time horizon that applied to the project, it was important that potential investors have a short starting distance to understand the preventive care project and be able to actively contribute to the design of the return model.

Region Uppsala

Do you have additional questions? Please contact:

Region Uppsala:

Angelica Sorio Wiklund, angelica.wiklund@regionuppsala.se

Evelina Nilsson, evelina.nilsson@regionuppsala.se

Skandia:

Helena Walentowicz, Helena.Walentowicz@skandia.se

SEB:

Mats Olausson, mats.olausson@seb.se

Isabelle Tibbelin, isabelle.tibbelin@seb.se

Issued date: 2025-03-11