eHealth HUB

European eHealth business support

SOLUTION MATCH

Ospedale Pediatrico Bambin Gesù is looking for a remote monitoring and symptom reporting solution to detect problems with shunts in paediatrics

Bambino Gesù
OSPEDALE PEDIATRICO

ABOUT **Ospedale Pediatrico Bambin Gesù**

Bambino Gesù is the largest paediatric hospital and research center in Europe, with connections to leading international centers in the sector. The hospital has a staff of almost 2,600 including physicians, researchers, nurses, clinical technicians and office staff.

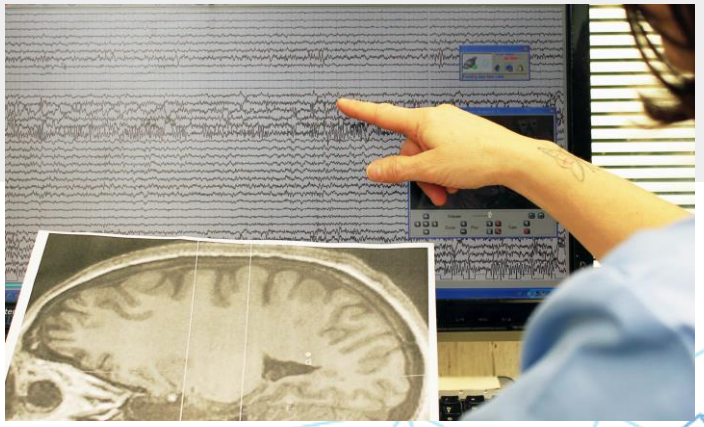
Ospedale Pediatrico Bambin Gesù treats and cares for a large number of patients: over 1.550.000 healthcare services are provided each year to children and adolescents from all over the world. Comparable to a city in its size, the hospital is inhabited by children who are treated, monitored and supported within an affordable, comprehensive and high-quality healthcare solution.

The Ospedale Bambino Gesù is known as the hospital for children and the hospital of the Pope. Adopting the slogan, "You think about your child, we'll think about everything else", Bambino Gesù is committed to ensuring that welcoming patients and their families is a fundamental part of the treatment process, from their first contact with the hospital - it is at the heart of the care provided.

THE NEED

Bambino Gesù needs a remote monitoring and symptom reporting solution to detect malfunctions with implanted shunts in paediatric patients with hydrocephalus.

The solution needs to be able to immediately identify implanted shunt models at the time of admissions. The system should also be able to estimate the risk of shunt malfunction by remote collection of clinical signs and symptoms, access to follow-up programs and adaptation of follow-up programs to clinical variables.

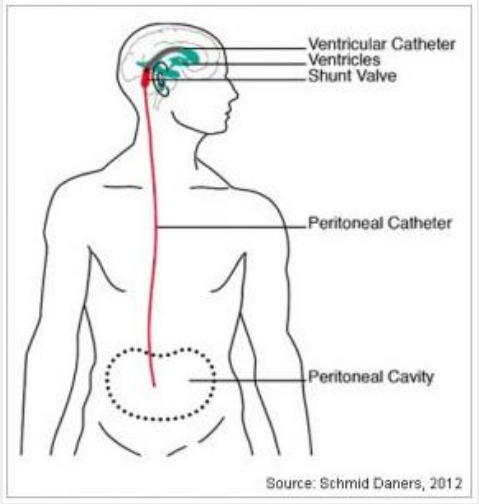


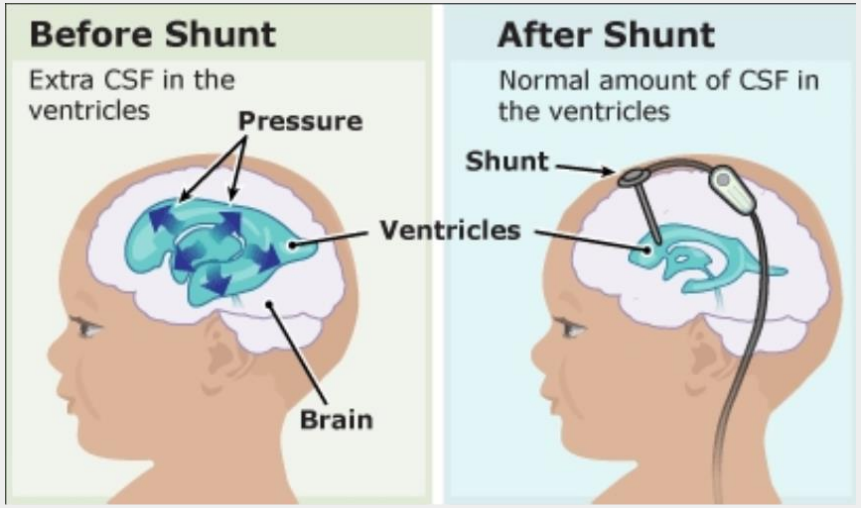
The scope of the project

The system would be used for remote assessment of patients at home. If successful, the system might be proposed to other Children Hospitals in Italy and potentially to any Center in Italy and Europe. There is a potential for creating a dedicated network with shared services.

About shunts

1M+ Americans live with hydrocephalus including 1 in 1,000 children born with hydroceplalus.
In this case, patients are babies, older children or teens





Hydrocephalus is a condition in which cerebrospinal fluid (CSF) accumulates inside natural cavities inside the brain (ventricles).

The most frequent treatment for hydrocephalus is CSF shunt (generally ventriculo-peritoneal shunt). A silicon tube is placed inside the ventricles an tunnelled under the skin until it goes through the abdominal wall to reach the peritoneal cavity.

A shunt valve is inserted along the shunting tube to help regulate CSF flow from the ventricles to the peritoneum.

The reporting of the monitoring system Opedale Bambi Gesù is looking for is done by patients themselves or parents/entourage.

Situations faced

Patient monitoring frequency (every day if possible)depends on the specific cases

Shunt malfunction can be suspected in case of:

- Enlarging head
- Worsening of neurological exam
- Change in ocular movement
- Recurrent headache
- Recurrent vomiting
- Worsening sleepiness
- Fluid collection along the VP shunt
- Signs of infection

Diagnostic exams include: CT scan and abdominal ultrasound

Shunt malfunction, independant of shunt type, can only be confirmed by Direct surgical exploration of the shunt

SOLUTION REQUIREMENTS

MUST-have requirements:

The assessment of shunts 'malfunctions is based on clinical symptoms and, if necessary, on medical exams that may be carried out in a medical office.

A system for this purpose should:

- Include a patient record allowing for remote updates, and accessible to the hospital staff independently from the EHR.
- Minimum information should include: unique ID of the shunt device (the solution should detect the device) , pictures of the child, morphometric measures (head circumference), clinical signs and symptoms, radiological or ultrasound reports performed outside the hospital.
- The patient record should feed simple algorithms to provide alerts to patients (and possibly the hospital staff) in case of potential shunt malfunction.

NICE-TO-HAVE requirements:

- The solution may be based on an app allowing patients and families to report symptoms.
- Continuous data collection would allow to build a knowledge base for the development of rules for risk stratification and need of shunt revision.
- Eventually, the solution would use artificial intelligence to analyze clinical symptoms and predict shunt malfunctions.

This would be a system for medical purpose. All the regulatory requirements for these tools apply and the solution should be CE marked. A continuous development of the system will be considered.

The ideal partner

An ideal partner for the development of the system should be available to work in a multidisciplinary environment, ready to give prompt technical support in local language (Italian), and should have experience in the development of remote health solutions.

Possible Business Relationships

Pay per exclusive licence use is the expected solution. License may have different levels based on the number of patients in the program. Once the system is developed and validated, it may be offered to other institutions in the hospital's network.

Desired outcomes:

- To reduce misdiagnoses of shunt malfunctions
- To reduce the time interval between malfunction detection and hospital care
- To reduce unnecessary emergency admissions.

PROCESS AND TIMELINE

NOW is the right time to express your interest!
[Click here to submit your solution.]

LAUNCH CALL FOR APPLICATION

10 April 2018

APPLICATION PERIOD CLOSING

27th September 2018

REVIEW OF APPLICATIONS BY OSPEDALE BAMBIN GESU

October 2018

FINAL FEEDBACKS FROM OSPEDALE BAMBIN GESU AND SELECTION OF POTENTIAL PARTNERS

October 2018

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THE INFORMATION YOU WILL NEED TO APPLY…

APPLY NOW

- Name of your organization
- Year founded
- Number of employees
- Your main area(s) of activities
- Your specialization
- Headquarters location
- Annual revenues in €
- Total number of current clients
- Key markets
- Website URL
- Brief solution description
- Link to a video presentation (optional)
- Development stage of your solution
- Possibility to further development the solution to meet all requirements
- Your value proposition for Opedale Pediatrico Bambin Gesù
- Interoperability of your solution
- Predictive analytics capabilities
- Regulatory compliance/CE certification
- KPIs and outcome measurements
- Customer references
- Ability to collaborate in a research project
- Capability to provide technical support in local language (Italian)

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About **eHealth Hub:**

Boosting The EU Digital Health Ecosystem!

eHealth Hub is an EU-funded project with the mission to provide long-term support to eHealth stakeholders and address key challenges facing European SMEs in that space.

About **Solution Match:**

Solution Match is one of 5 services offered by eHealth Hub, which focuses on accelerating the commercialization of European digital health solutions.

Working closely with demand-side stakeholders, Solution Match supports care providers, pharma companies, insurance groups and large IT vendors with the scouting and filtering for fit of solutions responding to their very specific needs and requirements.

BUSINESS MODELLING

ACCESS TO PRIVATE FINANCE

COMMERCIALIZATION

LEGAL & REGULATORY GUIDANCE