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It has been almost 20 years now, that Santé Diabète has been fighting inequalities of access to information, care, treatments and services of therapeutic education for diabetes in France as well as in Africa. This journey started in Mali in 2001 before moving to Burkina Faso, Comoros, France and other foreign countries, mobilising each time more people, associative and activist organizations, networks of health professionals and researchers, hospital partners and public authorities.

In our daily activities, we work to demonstrate that small changes can lead to diabetic patients having a better life, or simply live, and this in sanitary and economic fragile contexts. In 2022, thanks to our partner institutions and historical donors support, the mobilization of increasing network of actors and the unfailing engagement of our teams, Santé Diabète pursued its long-term effort to build capacities and skills of the organizations with which it works daily to host, inform, instruct, educate, train, screen, care, etc.

Many results were achieved this year beyond the implementation of regular activities undertaken in regard to two major programs entailing many projects funded by our different partners: one program that supports the fight against diabetes in Burkina Faso, Union of The Comoros and Mali while the other program focuses on the prevention and management of comorbidities diabetes/HIV and diabetes/TB. Patients’ organizations, healthcare structures, professionals’ organizations and public authorities, our daily partners, engage in dialogue, develop and implement policies, strategies and systems that improve both prevention and treatment of diabetes in Mali, Burkina Faso and Union of The Comoros. Our strategy of promoting civil society organizations in the South and North, as well as their allies and networks, highly contributes to better addressing the needs and interests of diabetic patients and their families.

2022 is also a remarkable year for the milestones achieved in the prevention thanks to the long term efforts of Santé Diabète: it is the year of introducing a major innovation in this field: it is the year of expanding the “houses of prevention”, a critical space that allows further development and scale-up of the prevention strategy. While the house of prevention was officially opened in Mali by the Minister of Health and Social Development, 2022 witnessed their replication in Burkina Faso and Union of The Comoros: the opening of houses of prevention in these countries constitutes the basis for comprehensive work at a larger scale within the three-year funding which is essential to curve the extremely fast evolution of the diabetes epidemic in Africa.

These encouraging results show Santé Diabète’s agility to adapt to contexts of increasing uncertainty, particularly in Mali and Burkina Faso. Our meticulous work supporting and strengthening health organizations and systems was compelling in 2022, and will still be compelling in the coming years, so as to remain engaged on the ground in a flexible and agile manner, to affirm our absolute neutrality in offering services to diabetic patients and to integrate emergency responses in our approaches.

In a global context always more fragmented, witnessing multiple conflicts where inequalities in accessing health cares are deep, showing solidarity and taking care of others is a militant and lifesaving act, an act we thrive to do daily through our engagement and actions.

Wishing you a fruitful reading of our annual report which I hope will encourage you to follow and support us.
The continent is sorely lacking trained health professionals and dedicated health facilities. 

1 in 2 (54%) of people with type 2 diabetes are not diagnosed and therefore not treated, with the corollary increase in complications that are disabling for the patient and costly for the health system.

Africa is the continent with the second lowest expenditure related to diabetes (13 billion USD), or 1% of global health expenditure being dedicated to diabetes.

90% of children and young adults with type 1 have a life expectancy of less than 1 year after diagnosis.

1 in 8 live births in Africa in 2021 is affected by high blood sugar during pregnancy.

Sources: International Diabetes Federation (IDF) 2021 Atlas
Access to health for women: in countries where Santé Diabète operates, women have overall a limited access to health and care compared to men due to economic, decision making and physical reasons. However, regarding diabetes in Africa, there is an over-representation of women compared to men in consultations and they greatly benefit screening.

Diabetes and pregnancy:
Gestational diabetes: Gestational diabetes affects 1 woman over 6 and progresses constantly. Women who are affected by gestational diabetes are subject to increased risk of complications during pregnancy and delivery. They also risk developing type 2 diabetes at a later stage of their lives. These complications range from an increased risk of miscarriage to the possibility of giving birth to a baby with congenital malformations. Monitoring is therefore recommended to prevent these risks.

Pregnancy in women with diabetes: Diabetic women are subject to increased risk of undergoing miscarriage or giving birth to babies with congenital malformations. That is why strict sugar control together with vigorous monitoring are necessary for pregnant women especially during the first 3 months of pregnancy, period of the baby organs’ development. In Africa, due to the lack of access to screening for diabetes, many women with diabetes are diagnosed during their pregnancy, causing confusion between pre-existing non screened diabetes and gestational diabetes.

Women and risk factors of diabetes:
In countries where Santé Diabète operates, there is a higher prevalence of overweight and hypertension among women, partly due to nutritional transition and to societal factors such as culturally favouring overweight.
SANTÉ DIABÈTE IN 2022

40 Collaborators

200 Partners

16,148 Pupils & students made aware of

91,273 People at risk screened

2,923 Health professionals trained

35,199 People with type 2 diabetes given care and support

1,651 Children with type 1 diabetes having access to free care

SANTÉ DIABÈTE is a non-governmental organization founded in 2001 to respond to the lack of access to care for diabetes people in Africa and the lack of consideration of this health emergency by development partners’ organisations.

First established in Mali in 2003, Santé Diabète then expanded its activities to Burkina Faso in 2012 and to the Union of the Comoros in 2016 to have up-to-date permanent teams in each of these three countries. It also operates in France, with its head office based in Grenoble.

OUR MISSION

We take part to the fight against diabetes at the national level by strengthening healthcare systems and civil society’s capacities developing a continuum of care from prevention to treatment and including national advocacy and stakeholders’ empowerment. At the international level, we lead an advocacy based on our expertise and our research work. We are an independent NGO recognized by the World Health Organization (WHO) and a representative member of its global coordination mechanism for the fight against non-communicable diseases (NCDs).

Santé Diabète has developed an unique expertise on diabetes in Africa, and more generally in low- and middle-income countries. It contributes specifically to the fight against diabetes in three countries: Mali, Burkina Faso and Union of the Comoros. Its expertise is acknowledged outside its countries of intervention as well as internationally: through missions to evaluate and strengthen health systems in partners countries, involvement in international research studies and participation to international experts committees. Since 2011, Santé Diabète has been developing a “health education and international citizenship” program in France, and thus promotes the knowledge’s exchange and transfer between North and South/South and North.

OUR APPROACH

Santé Diabète is unique in its approach and its implementation work.

- First NGO specialised in the fight against diabetes in Africa
- Its operational structure and management are based in West Africa as close as possible to the field
- Which helps promoting South-North, South-South and North-South collaborations
- Working to sustain diabetes care by strengthening national health systems
- Acting directly with ministries, health directorates, national, regional and local healthcare structures to build strong public policies
- Building a strong civil society through structuring and supporting patient associations
- Working without conflict of interest with the pharmaceutical and agri-food industries
- Contributing to the global fight against diabetes being the only independent NGO recognised by the World Health Organization (WHO) and as member of its global coordination mechanism for non-communicable diseases (NCDs)
- Alerting the world through global advocacy and mobilising an international network for local solutions.
Santé Diabète’s areas of expertise are multiple but align with the six pillars corresponding to the health system as defined by the World Health Organisation: 1- human resources; 2- information and research; 3- services provision; 4- drugs and technologies; 5- funding; 6- governance.

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<th>Area of Expertise</th>
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OUR COUNTRIES OF INTERVENTION: OVERVIEW

MALI

Mali, one of the poorest countries on the planet, has one of the lowest densities of health professionals in the world with only 0.7 doctors and 2 nurses on average per 10,000 inhabitants. The burden of non-communicable diseases (NCDs) continues to explode with currently more than 2.1% of the adult population with diabetes and 18% with high blood pressure.

In Mali, the number of adults with diabetes is estimated at between 100,000 and 500,000. Mali is already very severely affected by:

- A comparative prevalence of diabetes in adults (20-79, age-adjusted): 2.1%
- A prevalence of T1D in children and adolescents (0-19 years): 1.02 / 100 000
- Prevalence of risk factors:
  - Overweight in adults over 25: 28.1%
  - Obesity in adults over 30: 8.6%
  - Insufficient physical activity in adults over 18: 40.4%

UNION OF THE COMOROS

Located in the Indian Ocean, the Union of the Comoros remains among the poorest countries in the world. The coverage of health professionals is very low with only 1.9 doctors on average per 10,000 inhabitants and barely 2.6 nurses per 5,000 inhabitants. This low coverage does not make it possible to provide the population with sufficient health services, in particular for NCDs which have become an epidemiological burden throughout the country, with diabetes now affecting 12.3% of the population.

The Union of the Comoros is also severely affected by:

- A comparative diabetes prevalence in adults (20-79, age-adjusted): 11.7%
- A prevalence of T1D in children and adolescents (0-19 years): 6.625 / 100,000
- Prevalence of risk factors:
  - Overweight in adults over 25: 27.1%
  - Obesity in adults over 30: 7.8%
  - Insufficient physical activity: 14.3%
**BURKINA FASO**

Burkina Faso is one of the countries where the density of health professionals is one of the lowest in the world with only 1 doctor and 5 nurses on average per 10,000 inhabitants. This shortage significantly limits the country’s ability to provide its population with sufficient and equitable health services, with treatment prices being very high. The fight against NCDs - including diabetes - has become a priority with more than 30% of the adult population affected.

In Burkina Faso, the diabetes prevalence - in the absence of reliable statistics - has long been estimated based on the disease occurrence within the general population. According to figures from the latest *Diabetes Atlas*, Burkina Faso remains severely affected by:

- A comparative diabetes prevalence in adults (20-79, age-adjusted): 2.1%
- A prevalence of T1D in children and adolescents (0-19 years): 1.27 / 100 000
- Prevalence of risk factors:
  - Overweight in adults over 25: 23.2%
  - Obesity in adults over 30: 5.6%
  - Insufficient physical activity: 20.3%

**FRANCE**

Diabetes currently affects 4 million people or 8.6% of the population, a figure multiplied by 6 in barely 30 years. 90% have type 2 diabetes and estimations are that in 2019 nearly one million were unaware of it. The causes of this increase are directly linked to changes in lifestyles in high-income countries and to the combination of both social and environmental factors: overweight, obesity, lack of physical activity, sedentary lifestyle. Diabetes also strikes the most socially vulnerable, with, for example, much higher prevalence rates in the most disadvantaged communities.

While the health challenges facing the developing world increasingly echo those existing in the West (migration, social inequalities and their impact on health), our challenge is twofold: to broaden our preventive actions in order to reach new audiences (unaccompanied foreign minors, company employees) and develop new South-North synergies in connection with our programs in Africa (adaptation of tools for France).
**PROJECTS IMPLEMENTED IN 2022**

**“RÉSEAUDIAB” PROJECT**
The aim is “to improve the health and quality of life of the targeted countries’ populations by consolidating the civil society’s place and role in multi-operator networks. To better improve diabetes prevention, management, and to better support those living with this condition.”

This project is thereby implemented in the three target countries of Santé Diabète: Burkina Faso, Mali, and the Union of the Comoros, as well as in France for a triennial phase from 2020 to 2023. It is part of a “Convention Program” funded by the Agence Française de Développement (AFD) and is co-funded by the World Diabetes Foundation (WDF), the Helmsley Charitable Trust, “Life for a Child”, the Grenoble City Council and the Auvergne Rhône Alpes Region.

This project is based on an ambitious but sustainable approach: one that reinforces stakeholders’ capabilities in the target countries and helps set up an operators’ network that can, in turn, set-up actions on its own throughout the treatment continuum. Its main goal is to reinforce national health systems and civil society and as such is playing a key role in the fight against diabetes. The project works alongside all main stakeholders at national level: health ministers, health professionals’ organisations and specialised doctors, national NGOs, and patients’ associations and is anchored into each country partner’s National Public Health Policies.

The project intervenes in each component of diabetes care: from its prevention to its management, through national research and appeals, accompanying people with diabetes, their families, as well as people with risk factors and general population. It has led a major innovation which is being expanded in 2022: “houses of prevention, which are under structuration and expansion with the aim to become central to the prevention component in each country”.

Capitalisation and global advocacy are also an important component of the project. The expertise developed in these countries fuels actions, and in particular for the “international citizenship and solidarity education” program (ECSI) in France, which promotes the awareness about diabetes and its growing impact.

**DIABETES, HIV AND TUBERCULOSIS COMORBIDITIES PROJECT**
The aim is “to improve the skills of the workers intervening in health and in joint diabetes and tuberculosis and diabetes and HIV’s prevention and management care of the target countries.”

This project, which is in its second phase, has been covering and will continue to cover in the 2022-2024 period the three countries where Santé Diabète intervenes. Despite targeting a more specific theme than the RéseauDiab project, its conception and implementation work in total complementarity of “RéseauDiab”. The project is funded by France, via L’Initiative.

People living with HIV (PLVH) and tuberculosis are particularly vulnerable to diabetes. As a result, many patients in Africa present coexisting conditions of diabetes and HIV or diabetes and tuberculosis, requiring the implementation of an integrated approach in our target countries.

This integrated approach is possible thanks to this project, which with the “RéseauDiab one” aims to reinforce the health professionals’ skills intervening in both prevention and management of these types of comorbidities.

These two projects are implemented in complementarity, applying the same integrated and sustainable approach. 2022 has seen a pic of activities as the two projects were at midimplementation cycle. It has been rich in innovations too, especially with the inauguration of “houses of prevention” in the countries of intervention (see results).

It is important to note, however, that since November 2022 and following the France-Mali diplomatic crisis, all French funding targeted towards activities in Mali has been stopped (RéseauDiab as well as diabetes/TB and diabetes/HIV comorbidities projects). The activities continue with non-French funding under the official agreement of the Malian authorities.
The situational analysis includes the notions of gender, sex and the inequalities regarding these topics. It looks at these issues throughout the world, in our target countries, at work, in public health and of course zooms on the issue of diabetes and coexisting health conditions (HIV and tuberculosis).

The main approach to gender is often made from the prism of economic inequalities or social constructs between men and women. But biological differences also exist and have an impact on diseases prevention and management: these especially influence the prevention and management of diabetes, HIV, and tuberculosis. In addition, research, and in particular biomedical research, often excludes women, minorities and populations of poorer countries and as such fails to respond to their specific needs. Hence, applying a gendered approach in our programmes while considering the biological differences of the patient facing the disease, allows us to have a more adequate response to the specific needs of our target population.

More generally, in our target countries, women have less access than men to economic resources, food and health services and suffer from a lack of access to healthcare or lower-quality healthcare.

These elements impact the possible actions of prevention and management of diabetes.

The second part of the strategy is based on its implementation by Santé Diabète, which will start in 2023. Santé Diabète takes into account gender-related issues in its various programmes and within its structure. The aim being to formalise these actions so that they are fully integrated in the NGO structure and programmes’ implementation from 2023, a year of preparation, onward.
**SITUATIONAL ANALYSIS:** key facts

**Gender, economy, and development**
- The life expectancy gap between women and men can reach more than 11.7 years in some countries.
- Women account for 70% of people whose income is less than a dollar a day.
- They are half as likely to have a full-time paid job than men and their salary is around a third less for the same job.
- In developing countries, 60 to 80% of food production is done by women.

**Gender and healthcare access**
- In the countries where Santé Diabète intervenes, women generally have more difficulty accessing healthcare than men due to economic, decision making and physical activities access reasons.
- Given the cost of diabetes management, people living with the disease are very often stigmatized, even more so for women, who can be considered as a “burden” when sick.
- Many women are diagnosed during their pregnancy, due to a lack of accessible diabetes screening in regular care. But sometimes, the diagnosis is missed and they are at risk of dangerous complications for them and their children.
- Although tuberculosis affects more men (2/3) than women (1/3), women struggle due to more restricted access to treatments and to tuberculosis prevention services. Tuberculosis is a comorbidity frequently found in people with diabetes, the difficulties in accessing healthcare will have an even bigger impact on those women with diabetes.

**Diabetes and gender specificities**
- The presence of excess weight, obesity and hypertension is more common among women in the Santé Diabète targeted countries. Large numbers of women are more at risk of developing T2D due to the cumulated effects of nutritional transition, the valorisation of excessive weight among women in these contexts and less accessibility to sport/physical activities.
- On the other side, however, more women are being screened and cared for diabetes than men.
- But men, are more concerned by tobacco and alcohol consumption than women. They are more likely to have an unbalanced diet, which is very often high in fat and sugar in African contexts, due to eating more outside the household.
- Despite that, men present themselves later and less often than women in the healthcare structures.

**OPERATIONALISATION OF THE GENDER STRATEGY**

The implementation of Santé Diabète’s gender strategy in projects will be centred around 8 points of action:

**Raising public awareness around the notion of equality in healthcare access,** in order to avoid women and young girls being subjected to delays in screening or accessing healthcare for economic reasons. In addition, putting actions in place throughout to help better target and reach young boys and men.

**Deconstructing social norms surrounding obesity,** masculinities and the prestige of being overweight, by training health professionals and raising awareness among the general public to reach a large base in the population.

**Continuing the prenatal check-ups specific to gestational diabetes** and during pregnancy as well as improving the tools developed for this specific matter.

**Training health professionals** to take into consideration their patients’ sexuality.

**Training peer educators and civil society organizations** to raise public awareness on how to reach the target populations, especially young girls, who are often missed out of disease prevention and healthcare access.

**Implementing equality in the visuals used** (social marketing communication in particular), and design an advocacy campaign specifically about gender issues.

**Accompanying health professionals, civil society organizations, SD staff members and partners** in each country that could encounter gender discrimination.

**Using its network of committed journalists and media** to create broader awareness on this topic.
RESULTS ACHIEVED IN 2022
FOCUS 2022
Prevention houses: an innovation that becomes effective

The creation of prevention houses is a major innovation as it makes it possible to develop a place specifically dedicated to prevention but also to coordinate the various prevention actions in the country. Indeed, it will make it possible to carry out new actions within the walls of the house around new methodologies while linking those to the various actions already carried out in the communities, in prenatal consultations or even during screening days. This prevention continuum is central to offering different types of activities to different target audiences.

What is a Diabetes Prevention House?
The Diabetes Prevention House is a dedicated space for raising awareness among populations about diabetes and its risk factors, as well as promoting healthy behaviours in general through topics such as nutrition and physical activity. Its mission is also to promote therapeutic education to patients diagnosed with diabetes and/or high blood pressure to help them better manage their disease and thus avoid complications. Finally, the mission of the prevention house is to support people who feel the need to express their feelings and their difficulties in relation to diabetes (psycho-social assistance). Given the fact that 60% of people with diabetes is not diagnosed and in order to reach a wider audience, these activities radiate beyond the walls of the prevention houses, with prevention activities that extend to schools and high schools, to antenatal clinics and communities.

While the prevention houses are managed by dedicated staff from diabetes associations, the activities that take place there are mainly led by peer educators. In the three countries, they provide prevention activities on diabetes and its risk factors in the form of workshops “within the walls” but also “outside the walls”. The “outside the walls” activities take place in the community, in schools but also in prenatal consultations and participate in the strategy of expanding the target populations for a better impact of our prevention actions. Depending on the needs, peer educators can also lead therapeutic education sessions inside and outside the prevention houses for people with diabetes. Finally, the peer educators are also trained to provide animations for the prevention of diabetes in people with HIV and HIV in people with diabetes.

2021: a key year to prepare the opening of the prevention houses

Once identified in each country, the house teams and association focal points were trained to use the prevention and education tools (developed specifically to carry out these activities) but also in planning, management and monitoring of activities carried out inside and outside the walls. Teams from the NGO Santé Diabète, the NGO Walé and the National Diabetic Federation of Mali [Fenadim] supervised and supported this preparatory work.

2022 was a key year for launching the houses and starting prevention activities inside and outside the walls in the three countries.
1. Training and supervision of peer educators (PEs)

Staff training for the houses began in 2021 where PEs, associative focal points, and prevention house teams received initial training. These trainings made it possible to start the first animation activities in November 2021.

a. Supervision and companionship of peer educators during activities

During the activities, the peer educators are supervised using a supervision grid. In 2022, supervision of peer educators was carried out by Santé Diabète teams and the permanent staff of the houses, within the houses and in the field during activities in the communities, prenatal consultations (CPN), schools and centers of health, in order to ensure the quality of the actions carried out. These supervisions were carried out on a regular basis in the capital cities of the three countries. Outside the capital cities, they were performed once in the following periods:

- From June 8 to July 2 in Burkina in the regions of Koudougou, Manga, Tenkodogo, Banfora, Gaoua, Bodo Dioulasso.
- From May 16 to July 1 in Mali in the regions of Kayes, Sikasso, Timbuktu and Ségou.
- From June 9 to 16 in Anjouan and Mohéli in the Union of the Comoros.

b. Refresher training for peer educators and teams

A few months after the start of prevention activities inside and outside the houses, the analysis of the supervision sheets made it possible to identify the real needs for support requiring a second training of peer educators, associative focal points and coordinating teams of prevention houses was carried out.

The main objective of this training was to improve and strengthen the capacities and quality of interventions during prevention actions carried out by peer educators and focal points, but also to improve the quality of supervision carried out by supervisors, house teams, NGO Walé and Santé Diabète.

Thus, the refresher training covered:

- In Mali: the 20 peer educators from Bamako and the 4 focal points from the regions of Kayes, Sikasso, Ségou and Timbuktu as well as the teams from the house, the NGO Walé and Santé Diabète [Bamako, 15-22 September 2022].
- In Burkina Faso: 15 peer educators out of the 18 planned (for reasons of insecurity in the regions of Cascade, Banfora and South-West, Gaoua, 3 peer educators were unable to participate), the permanent staff of the house and the prevention team of Santé Diabète [Ouagadougou, December 19-22, 2022].
- In the Comoros: the 16 PEs, the permanent staff of the house and the prevention team of Santé Diabète [Moroni, October 24-27, 2022].

Training of peer educators in the Union of the Comoros, Burkina Faso and Mali
2. Review of activities carried out by peer educators

a. Screenings, workshops and events in the prevention houses

Users were directed to the house either by health professionals, or by peer educators during events, or by a phone call from the prevention house based on screening databases for people with a risk factor for diabetes or already with diabetes. Prevention activities were carried out in the prevention houses by peer educators in the form of personalized workshops following an educational path defined for each person.

In Mali

The workshops focused on several themes such as: preventing diabetes and its risk factors, diet and health, the benefits of physical activity, managing weight, managing blood pressure and preventing gestational diabetes.

In total, were achieved:
- **140 workshops** which have reached: **911** people (including 2/3 women). Among the users, **400** had at least one diabetes risk factor, and **98** were already aware of living with diabetes.
- **69 users who received a free blood glucose test** were referred for hyperglycemia to the nearest diabetes reference center in their area.

In Burkina Faso:

The workshops focused on the themes: preventing diabetes and its risk factors, diet and health, the benefits of physical activity, managing weight, managing blood pressure and preventing gestational diabetes.

In total:
- **34 workshops** were carried out in the Ouagadougou prevention house, involving **185** people (3/4 of them women). Among them, **1** had at least one diabetes risk factor, and **35** were already aware of being affected by diabetes.
- **10 users who received a free blood glucose test** were referred for hyperglycemia to the nearest referral center.

In the Comoros:

The workshops covered the following themes: preventing diabetes and its risk factors, the benefits of physical activity, managing weight, nutrition and health, and preventing gestational diabetes.

In total:
- **82 workshops** were carried out in the prevention house in Moroni, involving **343** people (including 1/3 women). Among them, **267** had at least one risk factor, and **71** were already aware of being affected by diabetes.
- **74 users who received a free blood glucose test** were found to have hyperglycemia were referred to the nearest referral center.
In Mali:
- **Official opening of the Diabetes Prevention House in Bamako**: it took place on Saturday May 07, 2022 under the chairmanship of the Minister Delegate for Refugees and Humanitarian Action. Several administrative, political, religious, and traditional authorities were present at the ceremony, which was covered by a network of 25 journalists involved in the network and in the fight against diabetes through various articles and reports. The organization of the event saw the involvement of the team of the house of prevention, the NGO Walé, the Federation of Diabetics of Mali and the NGO Santé Diabète.

- **Visit of Mrs. Diéminatou Sangaré, Minister of Health and Social Development**: On August 19, 2022, the Minister made a visit to the Prevention house of Bamako in order to meet the members of the FENADIM office and to better understand the mission of the house of prevention, the users journey through the house and the activities that take place. The meeting ended with a culinary workshop led by the house coordinator. The exchanges between the Minister and the associations were fruitful and constructive in the perspective of the development of the houses.

In Burkina Faso and the Comoros:

In Burkina Faso:
- 3 open house days were organized at the Prevention House from December 1st to 3rd, 2022, in conjunction with the celebration of World Diabetes Day.
- During these days, 9 workshops were carried out, involving 82 visitors divided into 3 groups.
- 3 themes were discussed with each group:
  - Prevent diabetes and its associated risk factors;
  - Balanced cooking with culinary workshops followed by tasting of light dishes from local, seasonal, accessible products, made by a chef, allowing participants to make a balanced meal at a lower cost;
  - Carry out regular and adapted physical activity with aerobic sessions under the guidance of a sports coach in the house.

In the Comoros:
- An “open house day” took place in the house, as a prelude to the WDD, on Tuesday November 15, 2022 with:
  - Free diabetes screening.
  - An exhibition of the various prevention tools used inside and outside the walls.
  - A projection of diabetes prevention cartoons and its risk factors.
  - 3 workshops on the prevention of diabetes risk factors were also led by peer educators for groups of 10 visitors.
b. Prevention actions carried out in the community

In Mali:
- **398** activities were carried out by peer educators and reached **4,503** people, 2/3 of them women.
  - **208 animations** in Bamako
  - **41** in Kayes
  - **39** in Sikasso
  - **75** in Ségou
  - **35** in Tombouctou

Among the people involved, 1,183 had at least one risk factor of diabetes and 243 already knew their status.

In Burkina Faso:
- **917** animations were carried out by peer educators, reaching **10,384** individuals, more than half of whom were women.
  - **363** in Ouagadougou
  - **49** in Gaoua
  - **89** in Tenkodogo
  - **118** in Koudougou
  - **104** in Banfora
  - **114** in Manga
  - **80** in Bobo Dioulasso

Among them, 2,486 had at least one risk factor for diabetes and 409 already knew their status.

In the Comoros:
- **491** activities were carried out by peer educators reaching **6,704** participants, nearly half of whom were women.
  - **64** in Grande Comoros
  - **280** in Anjouan
  - **147** in Mohéli

Among them 3,164 had at least one risk factor and 199 already knew their status.

Among the peer educators trained in each country, 4 peer educators lead prenatal consultation centers (ANC) in capital cities on the prevention of gestational diabetes, with the collaboration of midwives and gynecologists.

In Mali, peer educators achieved in total:
- **431** animations on gestational diabetes prevention in 32 prenatal consultation houses in Bamako, reaching a total of **5,524** women, among whom **552** had at least one risk factor for gestational diabetes and **42** were known to have diabetes. These animations also reached **113** men accompanying their wives.
  - 324 reference cards were given to women at risk and those who had not yet undergone a blood glucose test since the beginning of their pregnancy, so that they could get screened at their healthcare center. 1,164 flyers presenting the prevention houses were distributed during these events.

In Burkina Faso:
- **366** activities were carried out in 21 prenatal consultation centers in Ouagadougou. These animations saw the participation of **4,778** participants including **3** men accompanying their wives in consultation.
  - Among the women, **2,760** presented at least one risk factor for gestational diabetes and **1,475** of them who had not been screened for gestational diabetes during their pregnancy follow-up received a referral card in order to be screened in their care center.
  - 1,408 flyers from the prevention house were distributed during these events, inviting participants so that they could benefit from more information on diabetes in general.

In the Comoros:
- **278** animations have been carried out in these 3 health centres and **3,279** participants have been involved. The animations took place in 3 sites in Moroni: CHN EL Maarouf, the PMI, the Karthala Health Centre. In total: **2,732** women and **547** accompanying men.
  - Amongst these women, **1,279** had at least one diabetes risk factor and **14** already knew their status.
Before the start of diabetes awareness actions in primary schools and high schools, Santé Diabète carried out, in each country, a training of the actors involved: teachers, “SVT” Life and earth teachers, school principals, educational supervisors and peer educators.

The objective of these training sessions is to strengthen participants’ knowledge of diabetes, nutrition and physical activity in children and adolescents and to train them in the use of animation tools in the beneficiaries’ classes.

Stakeholders trained in diabetes prevention in primary schools

- In Mali, following the first session which took place in 2021, we carried out a second training session from January 26 to 28, 2022 which involved 38 participants including 12 teachers, 4 CAP members, 4 school principals, 16 peer educators from the regions of Kayes, Ségou and the right bank of Bamako and 2 staff from the Bamako prevention centre.

- In the Comoros, the training took place in 3 separate sessions on the 3 islands in January and February 2022 and involved 59 participants including 20 teachers, 19 school directors, 20 peer educators.

- In Burkina Faso, the trainings took place in January 2022 during 3 different sessions of which 2 took place in Ouagadougou and one in Bobo-Dioulasso. It involved 120 participants including 42 teachers, 21 peer educators, 42 members of school management and 15 educational supervisors.

In total, were held in 2022:

- 539 activities between the schools of Ouagadougou and Grenoble on actions to prevent diabetes risk factors.
- 120 sessions at Lucie Aubrac School
- 15 sessions at Malherbe School
- 15 sessions at the Houille Blanche School
- 38 sessions on the 3 islands in January and February 2022 and involved 59 participants including 20 teachers, 19 school directors, 20 peer educators, 42 members of school management and 15 educational supervisors.

Results of activities in primary schools in 2022 following training

Following these trainings, the following animations were carried out:

- In Mali, 12 primary school classes including 8 classes in Bamako, 2 in Ségou, 2 in Kayes have benefited from this activity. In total: 506 pupils and students including 264 boys and 242 girls were reached through 36 activities.

- In Burkina Faso, 42 primary school classes including 20 classes in Ouagadougou, 10 in Bobo-Dioulasso, and 2 in the regions of Koudougou, Gaoua, Ziniaré, Manga, Tenkodogo and Banfora have benefited from these activities. In total: 3,390 students including 1,750 girls and 1,640 boys were reached through 126 activities.

- In the Comoros, 20 primary school classes on the 3 islands including 10 in Grande Comore, 6 in Anjouan and 4 classes in Moheli benefited from this activity. In total: 626 pupils including 277 boys and 349 girls were reached through 60 activities.

Stakeholders trained in the context of diabetes prevention in high schools

- In Mali, we carried out a first training session which was held from September 12 to 14, 2022. The 3-day workshop brought together 40 participants, including 24 teachers, members of management and academy, 15 community leaders and 1 supervisor from Walé, from the regions of Sikasso, Timbuktu and the district of Bamako.

- In the Comoros, 3 training sessions were carried out, including one on each island, and involved 62 people, including 20 teachers, 19 peer educators, 20 members of school management and authorities under the Ministry of Education, as well as the 3 points non-communicable disease focal points of each DRS.

- In Burkina Faso, this activity will start in January 2023.

Results of activities in high schools in 2022 following training

- In Mali, 24 activities were carried out in 12 classes (8 in Bamako, 2 in Timbuktu and 2 Sikasso), i.e. in total: 425 students including 183 girls and 242 boys.

- In the Comoros, 20 classes benefited from this activity (10 in Grande Comore, 6 in Anjouan and 4 in Moheli), i.e. in total: 539 students including 232 boys and 307 girls through 40 events.

**Actions in connection with our programs carried out in our countries of intervention**

**Intercultural exchanges Grenoble/Ouagadougou**

The intercultural exchange activity in schools has been in place within the France delegation since 2012. During the 2021-2022 school year, four schools in the city of Ouagadougou took part to intercultural exchange activities with schools in Grenoble (Houille Blanche from November to July, Anthoard and Malherbe from January to July and Lucie Aubrac from March to July) initially distributed around 12 sessions. Additional sessions were necessary to cover the entire activity.

The new educational tool developed in 2021 was used in 2022. This activity was carried out in close collaboration between the delegation of Burkina Faso and the French delegation, particularly around joint exchanges and correspondence.

On April 14 and 15, discussions were held between students from the Gounghin Nord C and Cité de l’avenir schools in Ouagadougou and the Houille blanche and Anthoard schools in Grenoble on actions to prevent diabetes risk factors.

In total, were held in 2022:

- 15 sessions at the Houille Blanche school
- 15 sessions at Anthoard school
- 15 sessions at Malherbe school
- 13 sessions at Lucie Aubrac school

The week of June 27, the restitution of diabetes prevention activities between the schools of Ouagadougou and Grenoble took place in Grenoble.
These exchanges directly and indirectly benefited to:

- 98 pupils/students in Grenoble (and 295 students in Ouagadougou), including 47 girls and 51 boys,
- 150 pupils/students who benefited from feedback from other school classes.
- 12 adult supervisors, including 4 teachers (and 6 more who participated in the restitution), 2 «AESH» (specialized in children with disabilities), 2 service providers and 6 civic service volunteers.
- 75 parents of pupils/students who came to the restitutions and 150 who received an information letter, the program and the activity booklet.
- 8 institutional partners, including from the city of Grenoble.

The objective was to make pupils/students aware of food issues, whether they deal with health or environment, the complex and intricate nature of these issues, depending on where you live on the planet and the conditions under which food is produced, depending on where it is purchased.

Through two main activities, the objective was to create an exchange of knowledge between inhabitants, producers and professionals to make accessible and sensible for all the consumption of local, organic products, for health and Earth. A first part of these interventions was held in 2021, and the second part of the activity: in June 2022. The session was co-hosted by Santé Diabète, Au Local and Les Mijotées: on Thursday June 9, Monday June 13 and Thursday June 16 at the Collège Village Olympique.

During the 2021/2022 school year, this activity reached:

- 45 pupils/students
- 3 teachers
- through 6 prevention events

Actions in schools and support and social reintegration centers on diabetes risk factors:

This activity aimed to inform and raise awareness among the participants about the risk factors of diabetes and prevention methods by encouraging them to reflect on their habits and practices in relation to the discussed health-promoting behaviours. This activity took place in early 2022 in a session at the Christophe Turc School in Grenoble, which belongs to the network of schools in the priority education network (REP). It also took place at the Maison des habitants Prémol in Grenoble during sociolinguistic workshops with learners, and at the Verneil Formation Institute with individuals undergoing professional reintegration. The sessions took place on January 7th, 17th, and 28th, 2022, at the three respective locations.

The following individuals were sensitized:

- 20 CM2 pupils/students.
- 1 teacher
- 7 future healthcare professionals.
- 5 individuals undergoing professional reintegration.
- 11 learners during sociolinguistic workshops.
- 1 coordinator from the Maison des habitants (Community House)

Culinary and cultural activity around West Africa

On May 11, 2022, at the International Solidarity Center (PSI), was organized a culinary and cultural activity, a significant event that brought together all the associations of the PSI in Grenoble for a shared activity and to raise awareness about the center and its themes among the residents of the Malherbe neighborhood. A Senegalese cooking workshop was also offered for free, resulting in a buffet evening where the dishes were served. The buffet evening, in the presence of the association Azimuts, was organized around a storytelling event with the Burkinabe storyteller Pacos, followed by the screening of the short film “Les Débrouillards.” The film was made in Ouagadougou by artists from the collective. These activities contribute not only to the cohesion of the PSI but also to raising awareness about its actions externally.
3. World Diabetes Day (WDD)

As every year, Santé Diabète and its partners conducted various prevention and awareness actions as part of World Diabetes Day, which was organized on November 14, 2022.

In Mali, a press conference was organized with the network of journalists, various institutional partners, specialist doctors, and civil society, on November 10th, to promote the WDD and initiate public awareness. On November 14th, the celebrations of the Day itself were launched in Bamako, with the presence of the representative of the Minister of Health, the mayor of Commune 1, various authorities, civil society organizations, and technical and financial partners. The celebrations were marked by multiple activities, including screenings conducted over 20 days with prevention sessions led by peer educators. Some of these sessions were coupled with the screening sessions (total of 20), while others were independent from them (total of 22). In addition, various media awareness actions were conducted simultaneously through various channels. In total, there were articles in 9 newspapers and 4 online platforms, as well as 5 radio programs and 9 banners installed.

In Burkina Faso, Santé Diabète organized a press conference with the network of journalists, various institutional partners, specialist doctors, and civil society on November 14th. A rally with a physical activity session was added to the celebrations of this day in 2022. There were 20 screening campaigns coupled with 20 prevention sessions led by peer educators held with the authorities during the World Diabetes Day. Additionally, 30 additional prevention sessions took place around the day. 5 radio stations covered the press conference in Ouagadougou. A program was broadcasted on the National Radio-Television of the Comoros, along with a radio prevention program. Finally, 3 newspapers and 4 online platforms disseminated prevention messages as part of the day.

In the Comoros, on November 9th, the Director General of Health, accompanied by the WHO Noncommunicable Diseases focal point, the Directorate of Health Promotion, and the teams from Santé Diabète, took part to a press conference to prepare for the celebrations of World Diabetes Day 2022. On November 11th, Santé Diabète organized a conference and a debate at the University of the Comoros, in collaboration with specialist doctors. World Diabetes Day was officially celebrated on November 14th in the presence of the Minister of Health, authorities, civil society organizations, and technical and financial partners. Santé Diabète and the authorities conducted 16 screening campaigns coupled with 16 prevention sessions led by peer educators during the day. A press conference in Moroni was covered by 5 radio stations, and a program was broadcasted on the National Radio-Television of the Comoros, along with a radio prevention program. Finally, 3 newspapers and 4 online platforms disseminated prevention messages as part of the day.
4. Capacity-building for civil society organizations (CSOs)

In each of the three countries, a capacity-building workshop on the management, administration, and financial aspects of associations of people with diabetes was organized in collaboration with the NGO Walé. This type of action is part of a long-term strategy aiming at structuring local associations.

→ The objective of this training was to strengthen these associations in their internal structuring by providing them with tools to play an effective and proactive role in the fight against diabetes, particularly in the management and mobilization of funds for progressive empowerment.

In Mali, a 4-day workshop was held from November 1st to November 4th, 2021, and reached 14 association leaders, including 4 members of the National Federation of Diabetics of Mali (Fenadim) and its member associations. Two members from the associations in Kayes, two from Sikasso, two from Tombouctou, two from Ségué, as well as two members from the NGO Walé participated in the workshop.

In the Comoros, the workshop took place from February 28th to March 3rd, 2022, in Moroni, and reached 12 leaders from 6 associations across the three islands. Two representatives from the Comorian Association for the Fight against Diabetes (ACLD), two from the Association of Community Health Workers (AASC) in Moroni; two representatives from the Medical House of Anjouan (MMA), two members from the NARIENSHI association in Anjouan; two representatives from the Association of Diabetics and Hypertensive Patients of Mohéli (ADHM) and two from the Associative House of Diabetes in Mohéli (MDM) participated in the workshop.

In Burkina Faso, the workshop took place from March 7 to 10, 2022 and involved 20 association leaders. It involved the treasurers and presidents of 3 associations in Ouagadougou, 2 associations in Koudougou and 1 association for the other five regions: Banfora, Bobo-Dioulasso, Tenkodogo, Gaoua and Manga.

→ In Mali, the trained association leaders filled out this tool during the supervision missions conducted by the President of FENADIM, Mr. Maiga Karfa, between June 16th and July 1st, 2022.
→ In Burkina Faso and in the Comoros, the staff of Santé Diabète provided close and targeted support on administrative and financial matters to the staff of the two main partner associations involved with Santé Diabète through a convention regarding the management of prevention houses.

• In Mali, the structuring of the associations formed is significant and effective. The associative focal point trained local associations in the implementation of activities and the missions carried out by the president of FENADIM will have made it possible to strengthen the collaboration between the focal points and the associations in the implementation of activities.
• In Burkina Faso and the Comoros, the support of the leaders of the partner associations of the project also enabled the associations to improve the key elements of their associative, administrative and financial management.

In Mali, a 4-day workshop was held from November 1st to November 4th, 2021, and reached 14 association leaders, including 4 members of the National Federation of Diabetics of Mali (Fenadim) and its member associations. Two members from the associations in Kayes, two from Sikasso, two from Tombouctou, two from Ségué, as well as two members from the NGO Walé participated in the workshop.

In the Comoros, the workshop took place from February 28th to March 3rd, 2022, in Moroni, and reached 12 leaders from 6 associations across the three islands. Two representatives from the Comorian Association for the Fight against Diabetes (ACLD), two from the Association of Community Health Workers (AASC) in Moroni; two representatives from the Medical House of Anjouan (MMA), two members from the NARIENSHI association in Anjouan; two representatives from the Association of Diabetics and Hypertensive Patients of Mohéli (ADHM) and two from the Associative House of Diabetes in Mohéli (MDM) participated in the workshop.

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→ This tool has helped identifying operational difficulties and their causes, enabling the association leaders to propose their own solutions to address these challenges. It also allows for defining the roles of the leaders in implementing the proposed solutions.
→ This self-administered tool was filled out and discussed during the post-training evaluation and supervision missions on association management, administration, and finance. These missions provided advisory support to the associations, aiming to improve their functioning based on the findings of the tool.

b. The benefits of training and monitoring associations

The trained association leaders gave feedback on association management, administrative and financial issues to the rest of the members of their association office on their return and shared the training documents.

→ In Mali, the structuring of the associations formed is significant and effective. The associative focal point trained local associations in the implementation of activities and the missions carried out by the president of FENADIM will have made it possible to strengthen the collaboration between the focal points and the associations in the implementation of activities.
→ In Burkina Faso and the Comoros, the support of the leaders of the partner associations of the project also enabled the associations to improve the key elements of their associative, administrative and financial management.
5. Awareness-Raising Media Campaigns

Media campaigns are critical in Santé Diabète’s strategy to make the public aware of diabetes, its prevention, and management. These media campaigns can thereby cover a variety of topics, such as diabetes’ risk factors, prevention approaches, symptoms, and complications. These campaigns can take place through various communication channels as appropriate: television and radio programs, commercials, interviews, etc. This approach makes it possible to reach the wider population, which given the country’s number of undiagnosed adults, is key for an effective prevention strategy. Since 2021, Santé Diabète has been actively involved in setting up journalist networks that are aware of and trained in diabetes-related issues, thus expanding their knowledge on this subject, and allowing for greater coverage of Santé Diabète campaigns. For example, sharing quality information with the public to promote prevention houses. In addition to these journalist networks, patient and health professional associations are also critical in awareness-raising, given that they are in contact with the country’s highly streamed media outlets and thus complementary of those of journalists. In 2022, these awareness-raising media campaigns were conducted by various networks to reach as many people as possible.

a. Awareness-Raising with Journalist Networks Committed to Combatting Diabetes

In 2021, a project to identify and train 25 journalists in each country was conducted alongside journalist associations and newspaper, radio, and television media agencies (75 in total) in the 3 countries. The launch of this training project was conducted by Stephanie Gardier, an international scientific journalist who works with national French newspapers, such as Le Figaro, Le Monde, and Le Monde Afrique on a regular basis. Using her expertise in this area, she supports Santé Diabète with this range of activities.

These activities have led to the launch in each country of journalist networks that aim to publicize and broadcast information on diabetes, its risk factors, and means of prevention as much as possible, to reach the public that remains unaware of this disease. These networks and their means of communicating and sharing information supplement Santé Diabète’s other targeted activities. They make it possible to reach the wider population by extending their prevention messages to the general population.

In 2022, networks in each country produced various articles, reports, and programs, thus playing an active role in diabetes awareness-raising. Local journalist networks produced a total of:

- In Mali: 30 articles in various newspapers
- In the Comoros: 16 articles, 2 programs, 8 reports, 5 interviews, 1 audio spot, and 1 news release
- In Burkina Faso: 8 articles, 6 reports, 7 programs, and one web interview

**Prizes Awarded to Journalists in Each Country**

In order to incentivize journalists in their commitment to fighting diabetes and support the development of each network, Santé Diabète launched prizes to reward the best productions released between November 2021 and October 2022.

After deliberations and selection: 8 prizes were awarded to Burkina Faso and the Comoros (in December 2022) and 5 were awarded to Mali (January 2023).

b. Media Awareness-Raising by Patient and Health Professional Associations

**Program Making:**

These additional awareness-raising activities conducted by patient and health professional associations supplement those implemented by the journalists.

Also, before the activities began, Santé Diabète made a plan of action with its partner associations. This plan of action set out six topics to address by making various programs. The six priority topics were: Diabetes General Information, Type 1 Diabetes, Gestational Diabetes, Prevention Houses, Nutrition and Physical Activity in Patients with Diabetes, Diabetes and Ramadan.

This action plan also included the identification of various actors to deliver these programs. These activities involved endocrinologists, patients and their relatives, association officials and prevention houses leaders, etc.

Communication material was then developed with health professional associations on the chosen topics, thus emphasizing the most relevant issues and information for awareness-raising among the listeners and viewers of these programs.

**Program Creation:**

With this activity framework, participants could then create and broadcast these programs in each country, thus contributing towards the public awareness-raising strategy:

- In Mali, 6 programs, one television and 5 radio, were made and broadcast in 2022. These programs dealt with diabetes in general as well as diabetes and Ramadan
- In the Comoros, a total of 6 programs were made on diabetes general information, gestational diabetes, Type 1 diabetes, prevention houses, and nutrition and physical activity. 9 reports were made on diabetes and broadcast on national television. 7 awareness-raising messages were also made through trailers.
- In Burkina Faso, programs will begin in January 2023.

Award ceremony for journalists who signed the best productions in Burkina Faso in 2022.
6. WhatsApp Prevention Channels

It is not always possible to reach all individuals through traditional communication channels, especially young people, for whom the use of new information and communication technologies (ICTs) as a communication channel is important.

This is why Santé Diabète conducted an awareness-raising campaign for people with diabetes and diabetes risk factors on WhatsApp, thus expanding its ability to reach various target groups. In 2021, Santé Diabète and each country’s national bodies, such as patient and health professional associations, the Waté NGO and the Ministry of Health, thereby used free diabetes screening days to make a database of those either living with diabetes or with diabetes risk factors. In the same year, Santé Diabète created 12 awareness-raising videos on diabetes prevention and its complications in French, which were subsequently translated into various local languages in each country: Bambara in Mali, Mooré and Dyula in Burkina Faso and Shikomori in the Comoros.

In 2022, based on these databases in each country, two groups (those with diabetes and those with risk factors) were formed and received videos through two WhatsApp groups.

WhatsApp Group 1 targets those with risk factors:
• The Comoros: 526 people
• Burkina Faso: 390 people
• Mali: 572 people

Le groupe 2 - Targeting People with Diabetes:
• The Comoros: 215 people
• Burkina Faso: 242 people
• Mali: 422 people

7. Diabetes, Arterial Hypertension and Risk Factor Screening

As part of its prevention strategy, Santé Diabète holds free screening days for diabetes and arterial hypertension in these three countries. Screening day results for these countries were as follows:

In Mali:
• 50 screening days made it possible to reach 5,819 individuals in the country’s 10 regions. The rates of overweight and obesity among those screened were 30% and 21% respectively. 43% had abdominal obesity, 55% had at least one diabetes risk factor and 53% had at least one cardiovascular risk factor. 10% of new pre-diabetes cases, 5% of new probable diabetes cases and 13% of new probable arterial hypertension (AHT) cases were recorded in those screened.

These screening days were combined with 30 awareness-raising sessions on risk factor prevention conducted by peer educators

In the Comoros:
• 40 screening days made it possible to reach 3,735 individuals in the island’s 3 regions. The rates of overweight and obesity among those screened were 32% and 22% respectively. 48% of participants had abdominal obesity, 67% had at least one diabetes risk factor and 68% had at least one cardiovascular risk factor. 5% of new pre-diabetes cases, 7% of new probable diabetes cases and 39% of new probable arterial hypertension (AHT) cases were recorded in those screened.

These screening days were combined with 40 awareness-raising sessions on risk factor prevention conducted by peer educators.

In Burkina Faso:
• 78 screening days made it possible to reach 9,019 individuals in the country’s 8 regions. The rates of overweight and obesity among those screened were 19% and 19.2% respectively. 50% of participants had abdominal obesity, 68% had at least one diabetes risk factor and 67% had at least one cardiovascular risk factor. 7% of new pre-diabetes cases, 19% of new probable diabetes cases and 29% of new probable arterial hypertension (AHT) cases were recorded in those screened.

These screening days were combined with 50 awareness-raising sessions on risk factor prevention conducted by peer educators

These results do not only show the need and value of preventive interventions for early diabetes prevention, but also for the early screening of those with diabetes to help prevent its complications.
The implementation of the stage 2 of this project entitled “Strengthening Health Systems in Mali, Burkina Faso and the Comoros by Including the Combined Prevention and Management of Diabetes/Tuberculosis and Diabetes/HIV”, sets out several skill-building activities for the various participants involved.

CSOs have an important role to play in this process as they bring together those affected by comorbidities and thereby active participants in improving their treatment and quality of life. Also, in order for them to be fully prepared to play their roles in Diabetes/HIV and Diabetes/TB comorbidities prevention and management, Santé Diabète conducted two key activities in 2022. These involved skill-building for 72 civil society organizations (CSOs) involved in the prevention of Diabetes/TB and Diabetes/HIV comorbidities as well as the training of 48 peer educators (PE) from 24 community networks led by partner associations.

These activities took place over 5 stages:

• Updating the existing flipcharts from the last stage of the project
• Analysis and update of the association partners in the project
• Identifying, training and selecting peer educators in these three countries
• Creating community prevention activities
• Conducting skill-building for association officials

1. Providing prevention tools

Following the first stage of this project between 2017 and 2020, the analysis of prevention tools by PE and supervision teams (Santé Diabète and Walé) made it possible to identify several elements requiring an update. To that end, between November 2021 and January 2022, the picture boxes used in training were re-edited for Burkina Faso and Mali. Editing was made, followed by a testing phase with former peer educators from the project in Mali. Simultaneously, the work was fully adapted for the Comoros.

2. Partner Associations

In all three countries, an assessment was made to evaluate the possibility of adding new partner associations to expand the activities’ reach as much as possible. The Santé Diabète team met with each preselected association to discuss activities and their motivation in becoming implementing partners.

• In Mali, in addition to the seven initially proposed associations, three others contributed, achieving greater impact of awareness-raising activities. Ten associations in total were included, with eight in Bamako and two in Segou.
  – The following associations participated in Bamako: two diabetes associations, including the National Federation of Diabetics and the Association of Young Diabetics; six HIV associations, including REMA+, Sabuyuma Bamako Gabriel Touré Hospital, Arcad Santé Plus, Yeelen, AFAS and AMAS.
  – In Segou, associations included the NGO Walé, which is fighting HIV/AIDS and diabetes, and Keneyaton Segou, which is fighting HIV/AIDS.

• In the Comoros, in addition to the four partner organisations initially included in the project (FCAS, ASCOBÉF, AASC and ACLD), we partnered with Tous pour agir contre le Sida (Everyone in the Fight Against Aids) in order to reach people living with HIV (PLHIV), as it is the only organization raising awareness among people living with HIV in Comoros.

• In Burkina Faso, among 14 original partner organisations, ten were kept and four were replaced.
  – In Ouagadougou, four diabetes associations: VASD, ACDB, ADLMV, AJDB, and five HIV associations: AAS, IES-FEMMES, Aide moi à être mère (Help Me to Be a Mother) and Zems-Taaba.
  – In Bobo-Dioulasso, two diabetes associations (ABAD and An Kawili) and three HIV associations (AED, REV+ and Yerelon Bobol).
3- Identification and Training of Peer Educators:

After we updated our list of partner organisations, they each had to propose new peer educators based on specific selection criteria. Concurrently, the network of peer educators from the previous project was being evaluated in Burkina Faso and Mali in order to retain the highest performing and most widely available educators. In Mali (Bamako and Segou), Burkina Faso (Ouagadougou and Bobo-Dioulasso) and the Comoros (Moroni), respectively, a total of 19, 30, and 13 peer educators from the associations were retained for the project during this phase.

Selected peer educators received training in diabetes, tuberculosis, HIV and the interaction among the three diseases, leadership and facilitation techniques, and also use of the picture boxes. Santé Diabète moderated the following training sessions:

- **Mali** from 18-21 July 2022;
- **Burkina Faso** from 16-19 August 2022;
- **Comoros** from 3-6 August 2022.

One month after training, test activities for the final selection of PEs took place in each country’s health promotion centres. Using their tools, each trained PPE led an awareness-raising session for the leadership team, which included Santé Diabète. The PPEs with the highest scores were eventually selected:

- **In Mali**: 14 PPEs
- **In Burkina Faso**: 26 PPEs
- **In the Comoros**: 9 PPEs

4- Demonstrations by Peer Educators: Screening and Referral of Patients with Comorbidities

Demonstrations were held in Bamako and Segou, Mali; Ouagadougou and Bobo-Dioulasso, Burkina Faso; and Grande Comore, Comoros.

The following events for diabetes and TB prevention in PLHIV, and HIV and TB prevention in patients with diabetes took place in Mali:

- On the 2nd of November: in three centres in Segou [CScom Dembanyuma, Nianakôrô Fomba Hospital, Walé Centre] and on the 4th of November in ten health centres in Bamako (Health Reference Centres for communes I, II, III, IV, V, Mali Hospital, CESAC, CNAM, Gabriel Touré Hospital, Point G University Health Centre).
- In total, these events reached **304 people with diabetes** through 20 demonstrations, and **439 PLHIV** through 30 demonstrations, **for a total of 743 people**.
- 51 people with diabetes received a referral card for HIV screening, and 60 PLHIV received a referral card for diabetes screening. They were all directed to the referral department of their health centres for screening.

In **Burkina Faso**, the following demonstrations were held:

- October 2022 in six health centres in Ouagadougou [Samadin University Medical Centre, Bogodogo UHC, Saint Camille Hospital, Pissy and Kossodo Medical Centres, OASIS/AAS Medical Centre] and four health centres in Bobo-Dioulasso [Dafra Medical Centre, Dô Medical Centre, Sourou Sanou UHC and REVS PLUS Medical Centre].
- In addition to healthcare facilities, demonstrations took place in Ouagadougou at the head office of two APADs: AZET and ABCD. Between 1 October and 31 December, **1,518 PLHIV** attended 99 outreach programs, and **389 people with diabetes participated** in 38 demonstrations, **for a total of 1,907 people** (576 men and 1,331 women).
- 800 PLHIV received a referral card for diabetes screening, and 300 people with diabetes received a referral card for HIV screening. They were all directed to their health centre’s referral department.

In the Comoros, the demonstrations only focused on people with diabetes, and the first events focusing on PLHIV will begin in January 2023.

- **In Burkina Faso**, demonstrations took place at the community and hospital level (El-Maarouf National Hospital Centre and Caritas Moroni) and the preventive health centre. **They reached 117 people** through 23 events, divided between 55 men and 62 women. During these events, 47 referral cards for HIV screening were distributed to patients, who were directed to referral departments. Of 23 demonstrations, 10 were held at health centres, 2 at the MP, and 11 in the community for people with diabetes.

These activities were supervised by the preventive health centre teams, Santé Diabète and the NGO Walé in Mali.

5- Capacity-Building of Partner Associations

The general objective of these training sessions was to raise awareness among associations regarding comorbidities in people living with HIV and people with diabetes, preparing them to better advocate for the inclusion of diabetes/TB and diabetes/HIV comorbidities in the creation of policy papers.

In the Comoros, training was held from 20 to 22 December 2022 in the preventive health centre of Moroni and was attended by the twelve organization leaders and the centre coordinator. Capacity-building will take place in Burkina Faso in January 2023. This activity has not yet taken place in Mali.
PART III
Access to Health Care: Diabetes Management

1- Promoting Degree-Granting Specialization:

New Graduating Class in Diabetology
In 2022, a new graduating class in diabetology was enrolled with 14 medical doctors, 3 from the Union of the Comoros, 3 from Burkina Faso and 8 from Mali.

The 3 students from the Comoros received a full scholarship, and the 3 students from Burkina Faso received a partial scholarship.

Both academic seminars for this university diploma were held in Bamako from 20 to 23 June and from 3 to 6 October 2022. The first session was followed by a training session including teaching modules. Final exams will take place from 16 to 19 January 2023.

A Nutrition Course for Diabetes Management in Africa
Following student enrolment in 2021 and online evaluation of the nutrition course in April 2022, the results of student assessments came in, and final certificates were issued to candidates. Out of 62 enrolled candidates in Mali, 25 passed their evaluations, and 11 out of 68 passed in the Comoros.

2- Training of Healthcare Professionals in Tertiary Care Centres

• In the Comoros, after the initial training in September 2021, material needs were identified through nursing staff and department heads. The goal of this stage was to assess the current situation in the departments in order to meet any additional needs and strengthen the facilities’ technical support. Following this assessment, the four tertiary care centres across the three islands were provided with medical equipment for diabetic consultations.

• In Mali, Santé Diabète sponsored a post-graduate seminar given by the Malian Society for Endocrinology and Diabetology (SOMED) and the Malian Gynaecological Society (SOMAG0) in Bamako in December 2022. This high-level scientific conference specifically addressed diabetes and pregnancy, i.e., gestational diabetes and pregnancy in women with diabetes, and was attended by 64 healthcare professionals.

• In early September 2022, Santé Diabète partnered closely with the Ministry of Health, specialized medical doctors and the La Réunion UHC on new training to build skills in diabetes management for tertiary health centres [specialists for each island]. In total, this training reached 21 healthcare professionals, including 10 medical doctors and 11 nurses.

Map showing the distribution of students within the framework of the DES set up by Santé Diabète and impact in the sub-region.
3- Training of Healthcare Professionals in Secondary Care Centres

**In the Comoros,** 16 secondary care centres across the three islands received medical equipment to strengthen technical support for diabetes consultations. To further improve the skills of healthcare professionals, a new training session for pairs of secondary care diabetes specialists (physicians/nurses) was held the week of 12 September in Moroni, in close partnership with the Ministry of Health, medical doctors specialists and the La Réunion UHC. **16 medical doctors and 17 medical staff members attended.**

**In Mali,** following initial training for diabetes specialist pairs in 2021, medical equipment for diabetes consultations was provided to 33 secondary care centres in May 2022, and preparations were made to upskill healthcare professionals in diabetes in support of decentralised diabetes management. This training session was led the week of 25 July by the Malian Society for Endocrinology and Diabetology, in close partnership with the Ministry of Health. **27 medical doctors and 32 nurses attended.** Five medical doctors were not invited to this new training session, as they were specialists with a secondary school diploma in Endocrinology or a university diploma in Diabetology.

Field mentoring in Mali: After the upskill training, we supervised, along with SOMED specialists, diabetes consultations by diabetes-trained physicians in eight localities across two regions in Mali:

- **Kayes region:** September 27 to October 13
  - Kayes Town: September 27 to 30
  - Sahel of Nioro: October 4 to 6
  - Kita: October 11-13
- **Koulikoro region:** October 11 to November 18
  - Koulikoro Town: October 11 to 14
  - Fana: October 18-20
  - Kati: October 25-28
  - Dioila: November 8-10
  - Nara: November 14-18

Companionship of the country’s other diabetes clinics will end in 2023.

### Data on diabetes consultations carried out in 2022 by trained diabetes referral pairs

Santé Diabète’s training of second-referral healthcare professionals in each country enables these professionals to provide the necessary follow-up consultations and/or refer patients to 3rd-referral structures if necessary. The activities of these diabetes consultations carried out by second referral professionals are presented below:

**In 2022:**

- **In Mali:**
  - Nearly **34,521** people with T2D were regularly monitored by these diabetes referral pairs.
  - **583** women with gestational diabetes were diagnosed and monitored.
  - **718** cases of diabetic feet were treated.
  - And **2,478** patients with diabetes/TB co-morbidity have been diagnosed and managed, and **198** patients with diabetes/HIV co-morbidity are being monitored in the active file.

- **In the Comoros:**
  - Nearly **678** people with T2D were regularly monitored by these diabetes referral pairs.
  - **155** women with gestational diabetes were diagnosed and monitored.
  - **274** cases of diabetic feet were treated.

### Pilot project in Mali:

**Online training:** This activity continues in Mali with Dr Nientao (endocrinologist), who coordinates the ongoing training, between face-to-face sessions, of diabetes referral doctors from all regions (2nd referral structures) remotely through regular dedicated videoconference sessions. Dr Nientao’s consulting room has also been equipped with a videoconferencing camera and screen, to enable teaching based on clinical cases, as well as shared consultations with healthcare professionals in these regions.

Training programs are drawn up on a monthly basis according to the specific needs expressed by the referring medical doctors.

In 2022, Dr. Nientao realized: **15 lectures, 14 clinical case studies and 14 videoconference teleconsultations.**

Following their participation in the University Diploma in Diabetology seminar in Bamako in June 2022, the 3 Comorian and 3 Burkinabe doctors are also taking part in these E-training courses, and are considering a possible replication in their countries in the future.
4- Training for healthcare professionals working in the various regional healthcare structures where referring medical doctors are based

In order to strengthen diabetes management at all levels of the health pyramid, Santé Diabète has worked with the Malian Society of Endocrinology and Diabetology (SOMED) to train non-diabetes referral healthcare professionals working at the 2nd and 1st levels of the health pyramid.

These training sessions were followed by the provision of diabetes consultation equipment for the structures concerned.

A total of 316 healthcare professionals have been trained.

- In Kayes: the week of September 16: 44 healthcare professionals
- In Sikasso: the week of October 21: 56
- In Gao: the week of October 24: 41
- In Mopti: the week of November 6: 61
- In Timbuktu: the week of November 18: 43
- In Mopti: the week of November 8: 40
- In Koulikoro: the week of September 20: 31

5- Training healthcare professionals in the management and therapeutic education of type 1 diabetes (T1D) patients

As part of its drive to improve care for children and young adults with type 1 diabetes (T1D), the NGO Santé Diabète is committed to building the capacity of pediatricians working in the health facilities that care for these patients. The aim of this training program is to harmonize the management of T1D, and to foster collaboration between pediatricians and referring medical doctors in regions where this is possible, to ensure better coverage of the territory and improved care.

- In Mali, from June 27th to July 1st then from July 4th-8th we organised with Dr. Togo two training sessions for 4 paediatricians who care for children and young adults with T1D, 8 of whom are from Bamako and 27 from the regions of Kayes, Sikasso, Koulikoro and Ségou.
- In the Comoros, exchanges took place between July and September 2022, to prepare the organization of the 2nd session of the training course and the development of therapeutic education tools (ETP). The training was held from October 17 to 21, 2022, with teams from the CHU de la Réunion, and with the support of Dr Togo (who came from Mali for the occasion), for 13 healthcare professionals caring for T1D: 5 nurses, 5 pediatricians, an endocrinologist, an internist and a general practitioner.
- In Burkina Faso: 2 therapeutic education days involving 35 children with T1D aged under 25 were held with the Burkina Faso young diabetics association and specialist doctors on August 19 and 21, 2022.
- In Mali, as part of the Switch study on switching from human insulin to analog insulin, 24 days of education were provided for 260 children aged 10 to 25, divided into 2 groups of 130 (the first group on analog insulins and the second group on human insulins only).
6- DT1 community of practice

This work, which began in December 2021, aims to establish a platform in the form of a social network enabling patients with type 1 diabetes to discuss the disease, based on the key concepts of participatory sciences that put the patient at the centre and in the position of an actor vis-à-vis the disease, learning about what is good or not good for themselves. Such a platform therefore enables patients with T1D to themselves generate knowledge about the disease and actions to remedy it.

To set up this community of practice, a tool that can be easily used on a smartphone will be made available to a group of T1D patients already identified by Santé Diabète. The main functionalities offered will allow users to share content of varying character, in the form of images (the "story" concept of social networks) or discussions, to share in themed virtual chat rooms (glycemia, diet/recipes, living with diabetes, which doctor/hospital to use, using equipment, diabetes and sexuality, diabetes and Ramadan... etc), by written or vocal message, to access a personal dashboard to organize content, to describe typical days to get to know each other better.

The year 2022 was dedicated to the co-design of this community, with a dozen online workshops between January and December. They mobilized a multi-partner Malian team: Pr Sidibe and Dr Togo (doctors), Mr Maiga (President of the Mali Federation of Diabetics) and young leaders with T1D (Mrs Hadiaratou Maiga and Mr Sanogo). This work is coordinated by Santé Diabète and the Mosaic laboratory, specialized in participatory science at the National Museum of Natural History in Paris, a partner in the design of the tool.

The co-design work focused on several stages:
1. Define the problem to be addressed by the new community
2. Solving the problem of protecting shared and sensitive data
3. Reflect on participants’ motivations for taking part in the platform
4. Devising needs and exchange methods

In 2023, we will finalize the design of the platform and carry out the first tests with users.

7- Peer educator training and therapeutic education for patients with type 2 diabetes (T2D)

In order to improve care and support for people with type 2 diabetes, Santé diabète has organized a series of meetings in each country, a workshop in order to strengthen the knowledge and skills of Patient Peer Educators (PPE) in carrying out therapeutic education activities both inside and outside the prevention houses.

- In Mali, Santé Diabète, with the support of the National Federation of Diabetics of Mali [Fenadim] and therapeutic education expert David Nouet, trained 10 peer educators in therapeutic education and psychosocial support for T2D patients (week of July 28).
- In the Comoros, Santé Diabète, with the support of the Ministry of Health, its associative partners and specialist doctors, trained 10 peer educators in therapeutic education to reinforce patient support (week of November 4).
- In Burkina Faso, the same training in therapeutic education and patient support targeted 9 PEs (week of December 13).

The therapeutic education sessions resulting from this training will start in 2023 and, to ensure adequate coverage, will be carried out by peer educators in prevention centres, patients’ homes, association headquarters and health facilities.
8- Strengthening access to anti-diabetic drugs

In the three countries, the work around the recommendations of the last meeting of the dialogue framework on medicines initiated in 2021 continued in 2022. This work on access to antidiabetic drugs is critical for the implementation of diabetes management policies by the national authorities themselves.

- In Mali, faced with the problem of quantifying antidiabetic medicines needs at the level of the Directorate of Pharmacy and Medicine, the latter requested the support of Santé Diabète for the realization of a one-year thesis on the evaluation of national imports of insulins and oral antidiabetics treatments based on purchase orders collected at the level of the pharmacy and medicine department. The student in charge of this thesis is in the data collection phase and his database is regularly shared with Santé Diabète for reading and improvements.

- In Burkina Faso, the collection of data on the availability of antidiabetic drugs in the country has continued despite many difficulties. These data have been restored and bilateral meetings are planned with the various actors. The Santé Diabète teams are continuing discussions with the various players in an attempt to find consensual solutions despite the challenges.

- In the Comoros, during the period, monitoring of stocks continued, around drugs used for the care of patients with diabetes.

PART IV
Care offers: management of diabetes comorbidities: diabetes/tuberculosis and diabetes/HIV

In all three countries, trainings were held with the Ministries of Health and national training teams on the issue of diabetes/TB and diabetes/HIV comorbidities, following significant preparatory work on the training curricula conducted by national expert groups.

- In Burkina Faso: were trained in total over 3 weeks (beginning and end of May then June):
  - 33 doctors and 36 diabetes referral nurses
  - 17 doctors and 18 State-qualified nurses (IDE) HIV referents
  - 18 TB referent nurses and 18 HIV referent nurses

- In Mali: were trained in total over 3 weeks (beginning and end of May then June):
  - 38 doctors and 34 State-qualified nurses (IDE) specialize as diabetes coordinators
  - 24 doctors and 24 State-qualified nurses (IDE) specialize as diabetes coordinators
  - 24 doctors and 24 State-registered nurses (IDE) specialize as HIV coordinators

- In the Comoros: were trained in total over 3 weeks (June then beginning and end of July):
  - 16 doctors and 17 State-registered nurses (IDE) specialize as diabetes coordinators.
  - 14 nurses and 17 doctors specialize as tuberculosis (TB) coordinators.
  - 13 doctors and 17 nurses specialize as HIV coordinators
In 2022, the computerization of patient medical data from both central and regional levels for patients with T1D was finalized in Mali, constituting a major step forward. Computerization work continued in Mali during the year to include other datasets and achieve the creation of a “complete datahub” for the country. A reflection started in 2022 to extend this computerization of medical data to patients with type 2 diabetes.

In addition to patient data, 2022 saw the continued entry of health system-related data into the “datahub”. Thus, the activity of diabetes consultations in Mali as well as health professionals trained in type 2 diabetes, type 1 diabetes, diabetes / HIV and diabetes / TB comorbidities, and data related to diabetes screening are available in the Datahub. This process has been finalized in Mali and the data is already available in the “country datahub”. An attempt to extend this datahub has been carried out with data from Burkina Faso and the Union of the Comoros. This process will continue in 2023. This tedious but major progress achieved in Mali in 2022 will subsequently benefit from the computerization of data in Burkina Faso and the Union of the Comoros, even if contextual adjustment work remains necessary for each “country datahub”.

In parallel to the creation of the “Malian datahub”, discussions continued with the Malian Ministry of Health in 2022 to assess the options allowing the best access to data. However, the option of making the processed data available as information (in various formats, graphs, figures, maps, etc.) seems to have greater added value for equipping and supporting the Ministry of Health in decision-making. These discussions will be continued in 2023 in order also to assess the technical feasibility.
B- SUPPORT TO HEALTH MINISTRIES AND STRENGTHENING OF NATIONAL DIALOGUE FRAMEWORKS

First inter-country meeting

The first meeting of the “inter-country” dialogue framework organized by Santé Diabète took place on September 27, 28 and 29 in Ouagadougou, bringing together the Santé Diabète teams and the main institutional partners and associations patients from the three countries of intervention, i.e. about 70 people.

Opened by the Secretary General of the Ministry of Health of Burkina Faso, it proved to be a real platform for dialogue between the actors involved in the fight against diabetes, HIV and tuberculosis in the three countries. This “inter-country” dialogue framework, which aimed to meet the strong demand for sharing best practices, exchanging methodologies, and effectively capitalizing on actions taken, was a success for the participants. It initiated a coordinated regional advocacy dynamic on the topic of comorbidities between diabetes and HIV, and diabetes and tuberculosis. Furthermore, this first meeting made it possible to work on assessing the challenges and needs for the upcoming three-year programming phase. The resulting joint diagnosis will serve as the basis for the design and writing of the next funding proposals, which will take place in 2023.

Towards the establishment of universal coverage in the countries of intervention

As a key aspect of patient protection and care, universal health coverage (UHC) for diabetes is a cause that Santé Diabète is working towards through proactive advocacy:

- **Mali** is the country where discussions are the most advanced and promising: in 2022, Santé Diabète took part to expert discussions and ensured that diabetes care would be well taken into account in the final reimbursement packages. For type 1 diabetes, advocacy work is still ongoing to obtain 100% coverage by the State.

- **In the Comoros**, a project to support the implementation of universal health coverage (AMG) funded by the French Development Agency has been set up. In 2022, Santé Diabète in collaboration with the focal point on non-communicable diseases of the Ministry of Health and expert endocrinologist partners from the University Hospital of La Réunion, developed technical notes to inform proposals on healthcare packages and molecules for diabetes care reimbursement.

- **In Burkina Faso**, a national reflection process on universal health coverage is underway. During the period of 2022, Santé Diabète produced synthesis on the progress made based on meetings with various stakeholders. On this basis, it is planned with the Ministry that a strategy will be implemented aimed at maximum coverage for people with diabetes as soon as the country’s roadmap is clarified.

Zoom Mali : a workshop under the aegis of the Minister of Health

After the closed-doors meeting with the Minister of Health and her cabinet on March 25, 2022, with the aim of strengthening the national policy for the fight against diabetes, we organized a workshop on August 1, 2022, which brought together: departments of the Ministry of Health, patient associations, medical specialists and Santé Diabète.

This workshop made it possible to define a roadmap with priority actions selected by the participants to strengthen the actions included in the national NCD policy as well as the actions around social protection and diabetes and the strengthening of the place of patient associations.

Production of “working paper” on the comorbidities:

As part of the actions to strengthen the consideration of diabetes/HIV and diabetes/TB comorbidities, an advocacy document titled “Comorbidities, Diabetes, HIV, and Tuberculosis: Situation and Challenges,” specific to each country, has been prepared by our teams. These documents notably analyze the national guidelines for the fight against diabetes, tuberculosis and HIV, identify “gaps” and propose recommendations for each identified gap.

Cover page of the “working papers” on comorbidities developed in Burkina, Comoros and Mali.
1- “Switch” Study in Mali

The study “Evaluation of the impact of the introduction of a long-acting insulin analogue on clinical outcomes and quality of life of patients with type 1 diabetes in Mali” was developed by a group of researchers including Malian specialist doctors under the leadership of Dr. Togo, teams from the NGO Santé Diabète, teams from the Life For A Child Program, teams from the Hospitals and University of Geneva, and finally Dr. De Beaufort, a member of ISPAD.

The main objective is to determine the effect of the introduction of an analogue insulin and pens on clinical parameters and quality of life (QOL) among children and young adults with type 1 diabetes in Mali. Specifically, the following is being observed: glycemic control (measured by glycated hemoglobin), frequency of acute complications (severe hypoglycemia and severe hyperglycemia), changes in quality of life, and patient and healthcare professional satisfaction.

The study is conducted by comparing two groups, one continuing their treatment with human insulin and the other switching from human insulin to analogue insulin. Both groups receive comprehensive therapeutic education. In addition to changing insulin, the group benefits from support in introducing and using the insulin pen to administer the analogue insulin. Educational materials have been created to provide specific education on insulin changes.

The study started in February 2022 with the training of the Malian team, particularly on aspects related to knowledge of analogue insulin and its therapeutic effects. The various tools required for the study were also put in place: schedule, roles and responsibilities, patient appointments, etc. The researchers conducted the inclusion consultations, followed by the first therapeutic education sessions, monitoring calls, and consultation appointments for the patients selected for the study. A strict schedule of follow-up actions is defined and followed for each patient. Three follow-up cycles with individual calls and consultations were completed over the course of 2022. Three new cycles are scheduled for the first half of 2023, after which data analysis will be conducted to draw initial conclusions and recommendations. A total of 260 children and young adults with type 1 diabetes, evenly distributed between the control group (130) and test group (130), were followed in the cohort in 2022.

The results will be compiled and published during the course of 2023.

Presentation of the healthcare professionals responsible for implementing the study:

Dr. Amagara Togo, an endocrinologist diabetologist at the Hospital of Mali, has formed a team of five healthcare professionals to assist him in the implementation:

- Dr Fadima Coulibaly, diabetologist at the Hospital of Mali
- Dr Boureima Ouologuem, general practitioner at CSRéf C1
- Ms Tienou Agathe Mineta, intern at the Hospital of Mali
- Mr. Souleymane Diabaté, nurse at the Hospital of Mali
- Ms Berthe Djelika, nurse at CSRéf C1

Presentation of the multidisciplinary team responsible for supervising the study and training healthcare professionals:

- Montserrat Perolini and Dr Giacomo Gastaldi from the University Hospitals of Geneva
- Dr Togo Amagara, diabetologist at the Hospital of Mali
- Dr Julie Pellicand, pediatric endocrinologist
- Dr Carinne de beaufort, pediatric endocrinologist
- Pauline Trébuchet, medical coordinator at Santé Diabète
“Acciss” is a multicenter study conducted jointly by Health Action International (HAI), the University of Geneva, and Santé Diabète in four countries including Mali (Tanzania, Peru, and Kyrgyzstan).

The objective of the study is to improve access to insulin by analyzing opportunities and constraints related to its availability, as well as those necessary for its administration, such as syringes, pens, and glucose test strips.

In 2022, activities to strengthen access to insulin continued, while launching a longitudinal sub-study using a digital application: it will provide regular information on the availability of insulin and diagnostic tools, and measure the evolution of prices over time. The data was collected in six regions of Mali: Sikasso, Kayes, Koulikoro, Ségou, Bougouni, and the Bamako district on a sample of health facilities (30 public and 30 private pharmacies) and patient homes (120 with type 1 diabetes and 120 with type 2 diabetes) over a period of 12 months, and recorded on questionnaires programmed on smartphones or tablets. In 2022, Santé Diabète was able to complete four phases of data collection, after concluding a process of protocol setup and validation.

Overall, all patients with type 1 and type 2 diabetes provided data. Out of the 60 sampled health facilities, only 23 (14 public and 9 private) responded to the questionnaires, indicating their reluctance to provide information. The data is currently being analyzed by HAI, after being entered into the application.

### 3- “The health literacy” study

The present study, conducted through a semi-directive qualitative interview questionnaire, aims to evaluate the impact of prevention and education actions implemented by Santé Diabète (peer educators, WhatsApp groups, etc.) in Burkina Faso, Mali, and the Union of the Comoros.

This work aims to assess health literacy, i.e., patients’ knowledge of their own diseases, and the impact of these prevention and education actions on patients’ management capabilities.

To achieve this, the study relies on a specific protocol called the ‘Health Education Impact Questionnaire’ (HEIQ), which is derived from socio-anthropological sciences and requires all investigators and trainers to have skills in this field.

The study targets three groups of people, namely:

- **Group 1:** People with diabetes from the database of individuals followed in diabetes clinics in the three countries.
- **Groupe 2:** People without diabetes, from the database of individuals screened in the community for risk factors and also from prenatal consultations in the three countries.
- **Group 3:** People with HIV from the database of individuals followed in HIV clinics in the three countries.

Three prevention and/or education actions according to the target groups are evaluated:

- **Action 1** targeting people with type 2 diabetes from the database of individuals followed in diabetes clinics in the three countries who are supposed to benefit from diabetes complication prevention sessions (patient education).
- **Action 2** targeting people without diabetes from the database of individuals screened in the community for risk factors and also from prenatal consultations in the three countries. Action 2 is subdivided into three sub-actions:
  - **Sub-action 1:** Prevention using a WhatsApp group.
  - **Sub-action 2:** Prevention of diabetes risk factors by peer educators.
  - **Sub-action 3:** Awareness-raising on gestational diabetes by peer educators.
- **Action 3** targeting people with HIV from the database of individuals followed in HIV clinics in the three countries who are supposed to benefit from diabetes prevention sessions by peer educators.

The implementation of the HEIQ protocol is done in two stages:

- The first stage involves the HeiQ ‘Baseline’ questionnaire, which is composed of 40 questions prior to the prevention or educational intervention.
- The second stage involves the HeiQ ‘Follow-up’ questionnaire, which is composed of the first 40 questions of the Baseline questionnaire and 10 additional questions related to the preventive or educational intervention provided downstream.

Between the two stages, a minimum of 6 months is needed to measure the impact of the educational or preventive intervention carried out.

In the 3 countries, 60 people at T0 will receive the HeiQ “Baseline” for each action and sub-action.

While 2021 was devoted to preparatory activities and introductory training, 2022 focused on the start-up of activities and data collection. The baseline started in January 2022 and ran until June in all three countries, but only for target group 2 (people with risk factors). It was preceded by a coordination meeting at which the teams from the Prevention Houses were briefed on the sampling of participants. The study was also introduced to the healthcare facilities involved. The baseline questionnaires were administered to a total of 540 persons targeted by group 2 in the 3 countries, distributed to benefit equitably from each awareness-raising sub-action. These took place from January to June. These included prevention via a whatsapp channel; prevention of diabetes risk factors in the prevention centre or community by peer educators; and awareness-raising about gestational diabetes.

Data entry for baseline group 2 was based on four items: anonymization, socio-demographic data, clinical data and data specific to the HEIQ Baseline questionnaire.

From July 2022 to January 2023, the post-action phase begins for target group 2 (HEIQ follow up questionnaire). Once this phase has been completed, data analysis can begin, as an expert has been recruited for this purpose. The collection phases for the missing target groups will take place in 2023, and the analysis report should be available by the end of the year.
D - ADVOCACY AT THE INTERNATIONAL & FRENCH LEVELS

As in 2021, which was a rich year for Santé Diabète in terms of international advocacy, with the adoption by the World Health Assembly of a resolution on diabetes and insulin on the occasion of the centenary of the discovery, 2022 was a key year for continuing to link our findings in the field to national and global issues. Thus, continuing to alert political decision-makers and international agencies on the importance of making the right to health a reality for all has remained a challenge for Santé Diabète through its advocacy. Continuing to work with our international partners, both in France and in the countries where we operate, to advocate for the improvement of public health policies by building bridges between different themes (nutrition, medicines, the environment) remained an integral part of our philosophy throughout 2022.

FRANCE FOCUS

Presidential and legislative elections in France

The year 2022 was marked by the Presidential and Legislative elections in France, an essential window of opportunity to continue promoting the theme of access to care and the fight against diabetes, and to ensure that it is taken into account in the candidates’ programs and in the actions carried out by the Executive at national and international level. It led to a major analysis of the political candidates’ programs by our NGO, and meetings with several of them. So, after sending out a joint press release with the Observatoire de la transparence dans les politiques du médicament (OTMeds) on February 22, 2022, meetings were held between Stéphane Besançon, our General Director, and MPs Mathilde Panot, Clémence Guetté, and then, after the elections, François Ruffin. Stéphane Besançon also met Minister Olivier Véran at the Ministry of Solidarity and Health in February 2022.

How much are our lives worth? (“Combien coûtent nos vies?”)

September 1 saw the publication of the essay “Combien Coûtent Nos Vies” (How much are our lives worth?) (Editions 10/18), co-written by Jérôme Martin and Pauline Londeix (a member of the Santé Diabète team). In this book, a tribute is paid to Santé Diabète’s work on access to insulin. Supported by Santé Diabète, a conference was organized at the University of Geneva on December 13, with a presentation on the issues surrounding access to insulin by Professor David Béran, a member of Santé Diabète’s Board of Directors. This conference was organized with the logistical support of the Geneva University Hospitals (HUG), Santé Diabète and the University of Geneva.

GLOBAL FOCUS

Publication of a technical note by Santé Diabète and Médecins sans frontières (MSF) on the sidelines of the World Health Assembly.

In May 2022, on the sidelines of the 74th World Health Assembly, Santé Diabète and Doctors without Borders published a technical note to document and advocate for the regulation of insulin and healthcare product prices.

Attendance at World Health Organization (WHO) and follow-up meetings

At the end of January 2022, Santé Diabète continued its involvement in the follow-up discussions of the World Health Organization (WHO) Executive Committee, followed by those held at the World Health Assembly (WHA) in May. On 14 November, Stéphane Besançon participated in a WHO webinar as part of the Global Diabetes Compact, in conjunction with World Diabetes Day.
Stéphane Besançon, un activiste du diabète qui rayonne depuis l'Afrique

PORTRAIT - Directeur général de Santé Diabète, une ONG basée au Mali, le biologiste et nutritionniste œuvre avec brio depuis vingt ans pour améliorer l'accès des diabétiques à l'insuline.

E - TRIBUTE TO THE DIRECTOR OF SANTÉ DIABÈTE

On October 11, Santé Diabète CEO Stéphane Besançon was appointed Associate Professor at the National Conservatory of Arts and Crafts (CNAM). Stéphane Besançon's pioneering work in the fight against diabetes in Africa, notably as CEO and founder of Santé Diabète was recognized in a special feature in Le Monde published on 14 November. In May 2022, she had already given an interview to Le Monde. 

Stéphane Besançon, le directeur de Santé Diabète, à Paris (France). © Philippe Desmazes / Agency / 2023

Qui penserait que la question de la santé en Afrique n'ait pas de place dans le débat sur le diabète de type II ? Un médiateur de santé a eu cette idée en tête en mettant en lumière le travail de Stéphane Besançon, directeur de Santé Diabète, une organisation non gouvernementale qui l'a menée à l'annonce de son nom dans ce cadre. Le directeur de Santé Diabète a ainsi dit que le 11 octobre, la Sante Diabète a été destacada par l'annonce de son nom dans ce cadre. Le directeur de Santé Diabète a ainsi dit que le 11 octobre, la Sante Diabète a été destacada.
I - PUBLICATIONS, CONFERENCES AND TEACHINGS

TEACHINGS

In April 2022, Stéphane Besançon, as director of the NGO Santé Diabète, took part in the launch of the Mooc “Humanities in Health” directed by Cynthia Fleury and produced by the Conservatoire national des arts et des métiers (CNAM). This MOOC aims to produce a training tool based on the humanities in healthcare. Stéphane Besançon spoke on the subject of “The challenges of care in development policies”. Our participation in the MOOC is a continuation of the work carried out in Mali by the Chair of Philosophy in Hospitals (headed by Cynthia Fleury) and the NGO Santé Diabète on the humanities in health, for a holistic approach to care.

Conferences

- World Diabetes Congress 2022
  December 05 to 08, 2022, Lisbon Portugal

- 3th Diabetes in humanitarian crisis symposium
  Besançon. S. Expanding access to newer diabetic medicines and diagnostics in humanitarian settings
  October 20, 2022, Krakow, Poland.

- Actualités du Pharo 2022
  Besançon. S. Crisis alerts and responses - the role of information systems in countries of the Global South: the example of the NGO Santé Diabète in Mali
  October the 7th 2022, Marseille France.
  On Friday, October 07, Stéphane Besançon spoke at the News of the Pharo in Marseille: “Alert and response to crises: the example of the NGO Santé Diabète in Mali”.

- International conference on Advanced Technologies & Treatments for Diabetes (ATTD 2022)
  Besançon. Santé Diabetes in Low Income Countries (LIC): What technology to prioritize? April 30, 2022, Barcelona, Spain

- Participating in the 3rd Indian Ocean Health Research Congress,
  Santé Diabète’s Comoros delegation presented its preventive actions in the Union of the Comoros.
  November 10, La Réunion, France

Speech by Stéphane Besançon at the July 5 conference in Paris on “International cooperation between hospitals: constraints, perspectives, new approaches, evaluation and impact”

On Friday June 03, 2022, a series of conferences was held by the IRD and INSERM at the University of Corsica. Stéphane Besançon spoke at the first diabetes conference: “Damage, solutions, research”

Gender inequalities in access to healthcare (organized by PSI)
Speech by Pauline Londex for Santé Diabète April 27, 2022, International House, Grenoble, France
Available publications on diabetes to which Sante Diabète has contributed:


38% OF OUR FUNDS ARE USED DIRECTLY IN THE FIELD

The administrative and financial strengthening of Santé Diabète, led by the management unit, including the administrative and financial director (DAF) and the administrative and financial managers (RAF) of each delegation, continued in 2022 with a consolidation of the structuring of accounting, financial and administrative harmonization procedures but also in internal and external control procedures.

The external control procedures carried out during international audits continued, as did the quarterly internal control procedure (carried out by the DAF of Santé Diabète) with the aim of controlling the accounts and accounting documents of the head office and of all the delegations long. This procedure has been in place since 2018.

Our internal control mechanism, reinforced by annual audits and donor audits, but also the unqualified certification of our accounts by our auditor, guarantees the reliability of our accounts and the proper use of the funds entrusted to the NGO Santé Diabète.

FINANCIAL TRANSPARENCY

Strict external and internal financial control mechanisms has enabled Santé Diabète to report at all times on the proper use of the funds entrusted to it: annual external audits carried out by approved international audit firms, certification of accounts of the association by an auditor, external audits of our partners.

ORIGIN OF RESOURCES IN 2022

70%
Private origins

30%
Public grants

USE OF FUNDS IN 2022

98.8%
social missions

1.2%
operating costs

2022: THE END OF FRENCH PUBLIC FUNDING IN MALI

The end of 2022 was marked by the end of French public funding in Mali, putting the NGO in an unprecedented and complex situation for the management and continuity of its programs. This situation stems from the Franco-Malian diplomatic crisis which resulted in the cessation of all funding from the Agence Française de Développement (AFD) group in November 2022. However, Santé Diabète received official authorization in December via the Ministry of Territorial Administration and Decentralization to continue its activities as long as they are not supported by French public funding. Since then, Santé Diabète has worked in coordination with its financial partners to ensure the continuation of its activities in Mali and find lasting solutions to this financial crisis.

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## Origins of Expenditures (€) Year 2022

<table>
<thead>
<tr>
<th>Origin of Expenditures</th>
<th>Origin of Resources (€) Year 2022</th>
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</thead>
<tbody>
<tr>
<td>Purchases of goods</td>
<td>Sale of goods</td>
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<tr>
<td>Change in stock (goods)</td>
<td>Output sold (goods and services)</td>
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<td>Supply purchases</td>
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<tr>
<td>Change in stock (supply)</td>
<td>Immobilised production</td>
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<td>Other external charges</td>
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<tr>
<td>Taxes other and payments</td>
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<td>Staff remuneration</td>
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<td>Social charges</td>
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<td>Depreciation and amortisation</td>
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<tr>
<td>Allocations to provisions</td>
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<tr>
<td>Other expenses</td>
<td></td>
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<tr>
<td>Financial expenses</td>
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</tbody>
</table>

**Total (I)** 2,498,897.58

**Exceptional Expenses (II)** 1,019,798.50

**Income Taxes (III)** 229.92

**Total Expenses (I+II+III)** 3,518,926.00

**Gain or loss** 102,775.00

**Total** 3,621,701.00

**Free Provision of Goods** 3,063,372.44

**Volunteering** 180,000.00

**Services** 1,691.20

**Benefits in Kind** 1,691.20

**Volunteer Staff** 180,000.00

**Donations in Kind** 3,063,372.44

**Grand Total** 6,866,764.64

Supply procurement: corresponds to the needs of the association in terms of products or services necessary for its operation.

Stock variation: the difference between opening inventory and closing inventory allows only purchases consumed and products sold during the year to be taken into account.

Other external expenses: includes all expenses incurred with providers by the association other than salaries and taxes.

Taxes, duties and similar payments: charges corresponding to compulsory payments to the State and local authorities in order to support public expenditure.

Staff remuneration and social security contributions: all employee-related costs (wages and wage costs).

Depreciation charges: concern all tangible fixed assets but only part of the intangible fixed assets. Allows the recognition of the decrease in value of a fixed asset due to its use over time.

Other expenses: expenses incurred outside of the association’s regular providers.

Financial expenses: expenses related to foreign exchange losses and bank account charges

Income taxes: costs calculated on the basis of the profits made by the association.

Profit or loss: if the difference between the association’s income and expenses is positive, its net result shows a profit. If the difference between the association’s income and expenses is negative, its net result shows a loss.

Free provision of goods and services: includes the value of medical equipment and products made available to the beneficiaries of the association.

Voluntary staff: covers the costs of the fees of the experts who work for the association free of charge.

Sale of goods: all the goods sold by the association.

Production sold (goods and services): includes the income generated by the association’s services.

Operating subsidies: grants received by the association.

Other revenues: other income received apart from subsidies.

Financial revenues: interest received on bank accounts.

Donations in kind: includes the value of medical equipment and products made available to the beneficiaries of the association.