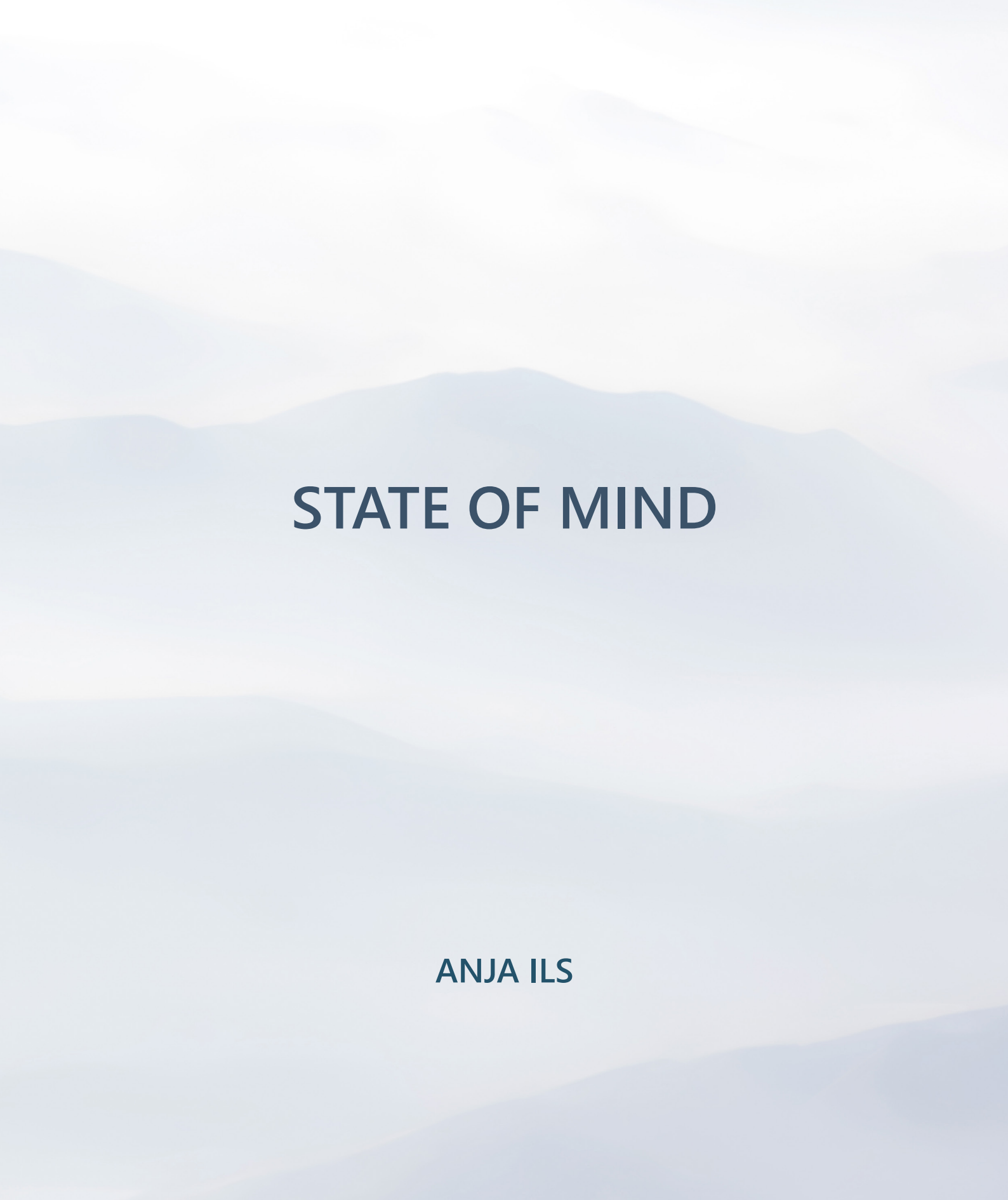


A background image of a mountain range shrouded in thick fog or mist. The mountains are layered, with the closest ones appearing in shades of light blue and the more distant ones fading into a pale, hazy white. The overall atmosphere is serene and ethereal.

STATE OF MIND

ANJA ILS

STATE OF MIND

CHALLENGES AND PERSPECTIVES IN CREATING A MENTAL HEALTH CENTER IN AN URBAN SETTING

ANJA ILS

Master Theoretical Statement
École Polytechnique Fédérale de Lausanne
2024

Thesis professor
and director

EMMANUEL REY

Expert

FLORENCE GRAEZER
BIDEAU

EPFL instructor

SOPHIE LUFKIN



2024, Anja Ils.

This is an open-access document distributed under the terms of the Creative Commons Attribution License (CC BY <https://creativecommons.org/licenses/by/4.0>).

The use, distribution or reproduction in other forms is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication is cited. Content from external sources is not subject to the CC BY License and their use requires the permission of their authors.

CONTENTS

PREFACE	5
ACKNOWLEDGEMENTS	7
INTRODUCTION	8
TOPIC AND METHODOLOGY	11
BACKGROUND RESEARCH	
1. THERAPY	13
1.1 Current models in psychiatry	14
1.2 The development of healthcare and psychiatric care in Switzerland	16
1.2.1 Cantonal hospitals and the politics of public health	16
1.2.2 Regional infirmaries	16
1.2.3 Private clinics and medical tourism	19
1.2.4 Psychiatric facilities	21
1.2.5 Administrative care	25
1.3 The evolution of mental healthcare in Switzerland – Current models	25
1.3.1 Outpatient care	26
1.3.2 Intermediate care - Day clinics and outpatient centers	27
1.3.3 Inpatient care	29
2. TERRITORY	31
2.1 Mental health in Switzerland	32
2.2 Challenges	32
2.3 Intermediate care	33
2.4 Mental health of children and adolescents	33
2.5 Cantonal plans	38

3. ARCHITECTURE	42
3.1 Healing architecture	43
3.2 Evidence-based design	43
3.3 Biophilic design	45
3.3.1 "Nature in the space": Direct experience of nature	47
3.3.2 "Nature analogues": Indirect experience of nature	48
3.3.3 "Nature of the space": Spatial configurations in nature	48
3.4 Urbanization and mental health	49
 4. CASE STUDIES	 51
4.1 Childhood and Adolescence House (MEA), Geneva	54
4.2 De Korbeel and De Patio Child and Youth Psychiatric Hospital, Kortrijk	69
4.3 Children's Day Hospital, Chevilly-Larue	78
4.4 Children Health and Support Center, Kitakami	86
4.5 Tzu Chi Humanistic Youth Center, Singapore	94
4.6 Discussion	103
 5. PROPOSED SITE AND BUILDING FUNCTION	 107
 6. CONCLUSION	 117
 7. APPENDIX	 119
7.1 Interview with Dr. Flavio Ungarelli	120
7.2 Correspondence with Claudio Peter (OBSAN)	124
7.3 Interview and MEA visit with Patrick Longchamp (CLR architectes)	125
7.4 Interview with Dr. Jalilla Puglia	130
 8. BIBLIOGRAPHY	 133

PREFACE

This master thesis addresses the topic of mental health and its related architecture. I started thinking a lot about this subject during the COVID-19 pandemic after learning about the mental health struggles of people around me. While some sought support, some had remained silent until they reached a breaking point.

Mental health has long been subject of public stigma, misunderstood or ignored. People with mental disorders have been alienated and discriminated against. In many countries, mental health remains a taboo subject that people feel ashamed to talk about. Yet, the effects of this long-term silence are evident.

Through this thesis, I would like to explore different strategies of how, as architects, we can take part in destigmatizing mental health. I also hope to question how we can create spaces that are more accessible and comfortable for individuals seeking help. How can we design in response to current needs while ensuring a safe inclusive environment to treat the whole person and promote healing? Furthermore, I hope to find alternate program combinations that could benefit the community in the long term, while remaining compatible with the functioning of a mental health center.

The COVID-19 pandemic and its toll on individuals sparked discussions surrounding the importance of mental health and seeking support. I believe these should continue as they are of utmost importance for the health and quality of life of the current generations and those yet to come.

As Dr. George Brock Chisholm, the first Director-General of the World Health Organization (WHO) once stated:

“without mental health there can be no true physical health”.¹

¹ Brock Chisholm. “Outline for a Study Group on World Health and the Survival of the Human Race”. Geneva: World Health Organization, 1954.

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to all the individuals who guided and supported me throughout the development of this thesis.

Thank you to

Professor Emmanuel Rey

Professor Florence Graezer Bideau

Dr. Sophie Lufkin

for your guidance, support, and input throughout the semester. Your advice was very helpful. It motivated me to dive deeper into the subject and step out of my comfort zone to further investigate.

Patrick Longchamp from CLR architectes, based in Geneva

for the organized visit of the MEA at the HUG and discussion on the project.

Tolila+Gilliland, based in Paris

for sharing plans of your day hospital project for children in Chevilly-Larue.

Dr. Flavio Ungarelli, child and adolescent psychiatrist and psychotherapist in Lausanne

Dr. Jalilla Puglia, psychiatrist and psychotherapist at the HUG in Geneva

for taking the time to explain and discuss with me mental health, psychiatric care, its related facilities, personal observations, and experiences as psychiatrists. These all provided me with a clearer insight into the vast field of psychiatry.

Claudio Peter, OBSAN, Swiss Health Observatory

Alexandre Tuch, OBSAN

Danièle Fallot, OBSAN

for sharing helpful documents and information, which provided me with a better understanding of the current mental health situation in Switzerland.

My family and friends

for your endless support throughout this journey, interesting discussions on the topic of mental health and proofreading.

INTRODUCTION

Mental health has long been a stigmatized subject in our society. Since the COVID-19 pandemic, people have been discussing it more openly and promoting the importance of prevention and treatment. According to the WHO, today approximately a billion people live with a mental disorder and a vast majority do not have access to proper mental healthcare. It is either non-existent or inaccessible, lacking capacity, unaffordable or so stigmatized that people do not dare seek help.²

² World Health Organization (WHO). "World Mental Health Report: Transforming Mental Health for All", 2022, 5. <https://www.who.int/publications/i/item/9789240049338>.

Buildings offering mental health services have also been viewed in a negative light for many centuries. The evolution of psychiatric infrastructures along with the shift in how society has regarded people with mental illnesses can offer insight into understanding this perception. According to Michel Foucault, we can divide the evolution of the concept of "insanity" into different periods: the Middle Ages, the Renaissance, the Classical Age, and the Modern Age. During these times, there appeared buildings with specific programs and conditions for the users, who were often treated in inhumane ways and lived most of their lives being sent from city to city or locked up in an institution.³

³ Michel Foucault. *Histoire de la Folie à l'Âge Classique*. Paris: Gallimard, 1972, 19-22.

In the first half of the 15th century, it was common for some cities such as Nuremburg to chase away people deemed "insane". While some were forcefully sent to other cities via ships, others were placed in the remote countryside. The so-called "Narrenschiff", Ship of Fools, truly existed. People with mental illnesses became vagabonds taken away by boatmen or pilgrims under subsidies. However, some other municipalities favored placing the "insane" in detention spaces during the Middle Ages and the Renaissance.⁴

⁴ Ibid., 19-22.

The Classical Age brought insanity to silence with the "Great Confinement". During the Enlightenment, the age of reason, internment houses were built to confine people deemed insane by the regime. In these monitored and repressed spaces, the inmates were forced to work and abide to the strict rules and exercises. The "lunatics" were first sent to hospitals, dungeons of prisons, correction houses or workhouses along with other marginalized groups.⁵ They then became known as "the alienated" or "aliens", to be exiled and silenced.⁶

⁵ Ibid., 55-60.

⁶ Ibid., 102-119.

The confinement of “the insane” in secluded buildings made psychiatrists, formerly known as “alienists”, observe, study madness and then eventually see it as an illness that could be treated and cured.⁷

⁷ Ibid., 527-530.

By the end of the 18th century, the dawn of the Modern Age, many medical institutions were constructed for “the insane” in the countryside with an approach to “moral treatment”. Patients were confined in these asylums, supervised by medical staff, and treated for their mental illnesses. To promote healing and introduce a more humane psychiatry, Pinel and Tuke highlighted the importance of occupational therapy and social interaction. During the 19th century, alienation combined with treatment was a common practice.⁸ In addition, the apotheosis of the medical figure had a large impact on the alienation system along with medical practices and the establishment of a new relationship between the patient and the doctor.⁹

⁸ Ibid., 493-495.

⁹ Ibid., 523-524.



“Narrenschiff”, Sebastian Brant (1457–1521), 1499. Scan of a copy of the original from 1499 in Basel. Wikimedia Commons.



“Scene in Bedlam”, Plate VIII from A Rake’s Progress, William Hogarth (1697-1764), 1735. Engraved by H. Fernell. Complete Works, p.102. Scanned image by Philip V. Allingham.



Overcrowded sleeping areas for patients, Fergus Falls State Hospital. Photograph from 1948. ©Minnesota Historical Society



Goodna Mental Hospital, Conversion of Male Ward. Photograph from July 1950, Agriculture And Stock Department, Publicity Branch. Queensland State Archives, Digital Image ID 1438. Wikimedia Commons.

At the end of the 19th century with the rise of positivism and doctors now possessing a more independent role in treating patients, psychiatric facilities were demystified. Freud, an important figure in the history of psychiatry and the founder of psychoanalysis, took part in the demystification process. He brought a new point of view on mental illnesses through his clinical research and practices.¹⁰

Community-based care became more prevalent after the middle of the 20th century with the deinstitutionalization of psychiatry and the progress made in psychotropic medication.¹¹ This meant decentralized facilities with outpatient services, crisis centers and regular support of people with mental health conditions. Modern psychiatric facilities that followed the architectural model of clinics and hospitals appeared soon after with specialized units, spaces for treatment and therapy as well as patient rooms. Modern mental health hospitals now offer various types of therapies ranging from psychotherapy, pharmacotherapy, family therapy, counseling, social therapeutic activities to specialized therapies like occupational therapy, art therapy, musicotherapy and psychomotricity.¹²

¹⁰ Ibid., 527-530.

¹¹ Edward Karen-leigh, Chris Alderman, "Psychopharmacology: Practice and Contexts" (Oxford University Press, 2013), 5-9.

¹² HUG. "LES TRAITEMENTS PSYCHIATRIQUES ET PSYCHOTHÉRAPEUTIQUES." Accessed 10 October 2023. <https://www.hug.ch/psychiatrie-adulte/traitements-psychiatriques-psychotherapeutiques>.

TOPIC AND METHODOLOGY

This theoretical statement explores the challenges of designing a mental health center in an urban setting today. How can we design a mental health center that does not only tend to the current needs but can also benefit the community and the city in the long term?

The mental health situation in Switzerland will be brought into focus. Through a selected bibliography, research, conducted interviews and correspondences with specialists, we will identify the current challenges and needs in terms of psychiatric care in the country. These sources will be key in proposing a project for a mental health center in an urban setting of Switzerland that can respond to the current needs.

The background research relevant to the topic is presented in three main axes: Therapy, Territory, and Architecture.

The first part of the background research covers therapeutic aspects and different structures of psychiatric care. The second part concerns the Swiss territory, its cantons and healthcare plans. The mental health situation among the population and the current needs in mental healthcare will be identified for specific age categories of the population. Finally, the third part explores healing architecture and biophilic design. How can architectural design significantly contribute to creating a comfortable healing environment that promotes overall well-being in a mental health center?

Interviews and correspondences with experts for each of the three subjects were led. For the first axis, interviews on psychiatry and therapeutic aspects were conducted with two psychiatrists working in different cities of Switzerland. The first interviewee was Dr. Flavio Ungarelli, a specialist in child and adolescent psychiatry and psychotherapy, who is currently based in Lausanne. The second interviewee was Dr. Jalilla Puglia, psychiatrist and psychotherapist at the HUG in Geneva, who has also formerly practiced in Valais.

For the second axis, territory, correspondences with experts from the Swiss Health Observatory (OBSAN), were established. Communication was directly established with Claudio Peter, head of area, who discussed some points with Alexandre Tuch, scientific project leader at the OBSAN

and Danièle Fallot, specialist at the OBSAN. The Swiss Health Observatory is tied to the Swiss Federal Statistical Office (FSO) and provided insight on the mental health situation of Switzerland as well as the current needs in terms of mental healthcare structures.

For the third axis, architecture, a discussion and visit with the architect Patrick Longchamp from CLR architectes based in Geneva provided first-hand insight into their recent project, the Childhood and Adolescence House (MEA) at the University Hospital of Geneva (HUG). This project is featured as a case study in the next section.

In the section following the background research, five case studies of mental health facilities in different types of urban settings around the world will be analyzed. The analysis will be based on research, conferences, conducted interviews, site visits and observations. These recent projects have not only been selected for their architectural qualities, interesting programs, and urban integration, but also for their different approaches in mental healthcare for specific age categories that would currently require more mental healthcare facilities in Switzerland.

After the analysis of the case studies, ten strategies that have been used in the different projects will be identified and discussed. These case studies and strategies will be key in proposing a project for a new mental health center in an urban setting. They will also help in identifying a potential site.

In the last section of this thesis, the proposed site and building function for the architectural project following this theoretical statement will be presented. The potential site will be analyzed from different angles, serving as a base for the future project proposal.

The conducted interviews have all been summarized in the appendix section, which can be found after the conclusion. The knowledge, explanations and experiences shared by the different specialists were significant sources in the development of this work and provided deeper insight into the topic.

1

THERAPY

1. THERAPY

1.1 Current models in psychiatry

The World Health Organization (WHO) believes restructuring mental health services is one of the necessary approaches in tackling and improving the overall mental health situation of people around the world. Instead of concentrating on the care of most health conditions in psychiatric hospitals, a shift towards more community-based mental health services could be beneficial, especially when it comes to certain mental health conditions. This would also increase accessibility with decentralized services closer to home. Community-based healthcare functions with a recovery oriented, holistic, and evidence-based approach, engaging individuals, families, and communities as active participants of care. This type of care could appear as community health centers, peer support services, psychosocial rehabilitation programs or supported living services. The idea is to support individuals in their own neighborhoods so that they can continue living in their local communities while self-managing their illness at the same time.¹³

On a global scale, it is important to mention that there is a big disparity in terms of governments' commitment and investment in mental health care, as well as differences in demands and practices. It depends on a country's social, political, and economic situation. Higher-income countries will naturally have more capital and resources to invest in mental health services, for example.¹⁴

While many countries around the world possess a psychiatric inpatient and outpatient care system, community-based care is not always present. Inpatient care focuses primarily on treating patients with severe mental disorders like schizophrenia, bipolar disorder, and severe depression. These can sometimes include personality disorders, eating disorders and anxiety disorders if the person's functioning is deeply affected. Outpatient care is more targeted towards individuals with some more common mental disorders such as anxiety, depression and substance use disorders.¹⁵

In the 20th century, a process of deinstitutionalization has been observed, especially in high-income countries. Long-stay inpatient psychiatric facilities have gradually been replaced by specialized units in general somatic hospitals or by community-based mental health centers.¹⁶

¹³ WHO, "World mental health report: transforming mental health for all", (Geneva: World Health Organization, 2022), 189-204.

¹⁴ Thornicroft, Graham, Tanya Deb, and Claire Henderson. "Community Mental Health Care Worldwide: Current Status and Further Developments". *World Psychiatry* 15, no. 3 (October 2016): 276–86. <https://doi.org/10.1002/wps.20349>.

¹⁵ Dan J. Stein, Steven J. Shoptaw, Daniel V. Vigo, Crick Lund, Jason Bantjes, Norman Sartorius, and Mario Maj, "Psychiatric Diagnosis and Treatment in the 21st Century: Paradigm Shifts versus Incremental Integration", *World Psychiatry* 21, no. 3, October 2022, 394. <https://doi.org/doi: 10.1002/wps.20998>.

¹⁶ Ibid., 394.

While community-based services present many strong points, they require viable communities, families, social networks, or organizations to be successful. One of the basic conditions for this type of model to work is that the community in question offers a supportive and safe environment for individuals with mental illnesses. Unfortunately, in places where there are high levels of inequality, poverty, domestic violence and war, this premise is not fulfilled and there would be a need to address the drivers and root causes which continue to perpetuate some mental illnesses within the population.¹⁷

¹⁷ Ibid., 402.

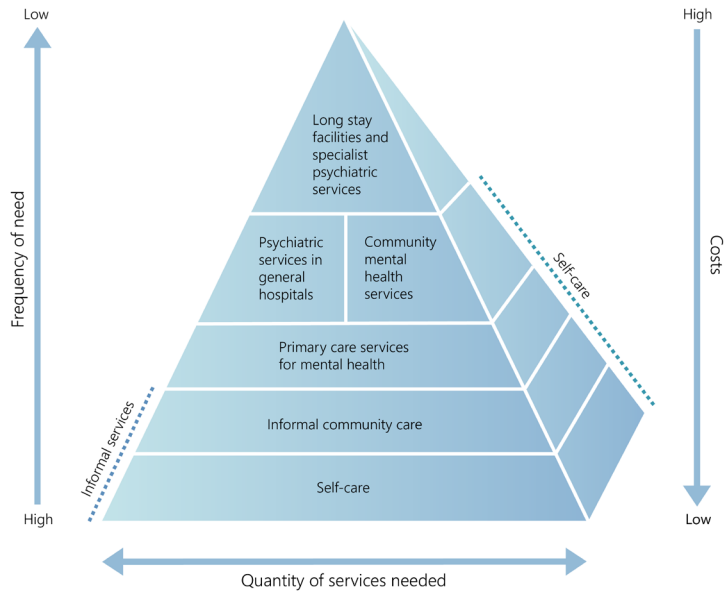
¹⁸ Graham Thornicroft, Tanya Deb, and Claire Henderson, "Community Mental Health Care Worldwide: Current Status and Further Developments", *World Psychiatry* 15, no. 3, October 2016, 282. <https://doi.org/10.1002/wps.20349>.

There are also risks which come with the deinstitutionalization of inpatient hospital-based services for reasons of cutting costs. In this scenario, with no replacement for the reduced number of beds, the quantity and the quality of mental health care will suffer leading to transinstitutionalization. However, in the case where reducing inpatient beds is done conscientiously, community-based care costs are very similar to hospital-based care for long term inpatients.¹⁸ Evidence shows that a model of care that only relies on inpatient and outpatient care is not sufficient in providing access to individuals with mental health illnesses and offering them a follow-up in case of long-term illness. Yet, when one is having a mental health crisis, community-based treatment cannot necessarily offer the same intense treatment that inpatient care can. All in all, a balanced model with the three types of care would be ideal but the ratio of each also depends on the country's situation and the number of mental healthcare staff available.¹⁹

¹⁹ Ibid., 277.

WHO service organization pyramid for an optimal mix of services for mental health.

Adapted from Figure 1.1 in "Integrating mental health into primary care: a global perspective", 2008, p.12 ©WHO



1.2 The development of healthcare and psychiatric care in Switzerland

1.2.1 Cantonal hospitals and the politics of public health

During the first half of the 19th century, major hospitals across the country were constructed. This surge in construction was not due to a medical revolution, but rather the context at the time: the rise of the modern era and industrialization. Territories were morphing considerably because of urbanization and rapid population growth. There was a necessity to offer medical care to the entire population in cases of illnesses and emergencies since back then only more privileged individuals could afford to receive treatment in times of need.²⁰

²⁰ Pierre-Yves Donzé, Bâtir, Gérer, Soigner – *Histoire Des Établissements Hospitaliers de Suisse Romande*, Geneva: Georg Editeur, 2003, 65-76.

Ambitious cantonal hospital projects for the population started appearing after the radical revolutions from the 1840s, breaking ties with the ways of the Ancient Regime. The goal was not only to offer medical care to the population, but also for the authorities to instore the politics of public health through this type of facility and exert their power. The right to access medical facilities and get treatment as well as the duty to heal were key in the politics of public health. The cantonal hospital of Geneva opened in 1856. It became a university hospital linked to the School of Medicine in 1882, six years after the opening of the medical school. Vaud's cantonal hospital in Lausanne opened in 1883 with the integration of the faculty of medicine in 1890.²¹

²¹ Ibid., 65-76.

1.2.2 Regional infirmaries

Regional infirmaries can be seen as the precursors to the bigger medical institutions that will later be known as regional hospitals. Infirmaries began multiplying considerably across the territory in the 1850s. They were often the fruits of private donations from local families or sometimes even funding events. One could find these modest infirmaries located in private residential buildings or former hospitals from the Ancient Regime which were made available by municipalities. However, some were also located in the countryside or even in windmills. Indeed, regional infirmaries were generally located in lower-cost locations and not necessarily in spaces dedicated to medicine.²²

²² Ibid., 65-76.

At the beginning, these facilities offered a limited number of beds ranging from 6 to 20, which after a few years, reached 90 to 180. Patients were under the care of attendants, deaconesses, and local doctors. The latter were free to come and practice. Before the development and expansion of these regional infirmaries, doctors and staff would work free of charge, which was seen as a charitable and benevolent act for the more vulnerable. Even the local community, be it families or schools, would contribute to infirmaries in their own ways. From 1880 to 1914, there was a true expansion in the infirmary network in Switzerland and many existing infirmaries moved into new buildings dedicated solely for this function. Because many regional facilities and cantonal hospitals were already overcrowded, new modern infirmaries were built during this period.

In the canton of Vaud, two major infirmaries were opened: the “La Source Clinic and Nursing School”, known before as the “Beaulieu Clinic” and the “Providence Infirmary” in Vevey. In fact, in 1907, the State signed a Convention with the “La Source Clinic” so that they could relieve the overloaded cantonal hospital by welcoming patients in their facility at the expense of the State.²³ These new buildings housed a more modern system linked to significant medical progress in fields such as surgery. In the field of radiology, an attributed unit was not yet present, however since radiologists were scarce, infirmaries would often call an external radiologist to come by the facility a few times during the month. Moreover, modernization in the technical building systems ensured access to clean water, electricity, heating, and the telephone. The previously mentioned elements led to better organization of these modern infirmaries and overall, better hygiene.²⁴

²³ Ibid., 114-118.

²⁴ Ibid., 66-77.

In terms of hospital financing, Vaud was mainly focused on the cantonal hospital in Lausanne for the first part of the century. In the 1860s, the canton began taking interest in these local independent infirmaries across different districts, as they could help regulate the overcrowding of the only cantonal hospital at the time. This decision was in line with one of the canton’s main concerns: the future of public health. In 1873 and 1875, laws were passed concerning infirmaries as corporate entities. They would remain independent under the power of their local committees and not run by the state like cantonal hospitals. It was possible for infirmaries to receive donations from the state without taxes, which made them benefit financially from this source.

Infirmaries kept their philanthropic and charitable side while at the same time responding to the social issue that much occupied the authorities. Between 1875 and 1914, the state financed 11.8% of the “Hospice Services” expenses for local infirmaries. The “Hospice Services” included the cantonal hospital, the psychiatric hospital of Cery, the Lavey Baths, local infirmaries and recovery homes.²⁵

²⁵ Ibid., 66-77.

During the industrial revolution, infirmaries also revealed industrial paternalism through their fundings or their locations. Indeed, certain industrial figures were very involved in the creation of new regional infirmaries. In addition, companies of the watchmaking industry in the cantons of Jura and Neuchâtel started integrating small infirmaries for their employees in their own buildings.²⁶ The hospital of Fleurier in the canton of Neuchâtel is an interesting case. It was opened in 1868 by the industrialist Edouard Vaucher. He converted a temporary watchmaking school for poor children he had opened years prior into this medical facility since its original program had not functioned according to his plans. The hospital, former watchmaking school, was gifted by him to his municipality of origin.²⁷

²⁶ Ibid., 162-164.

²⁷ Ibid., 153.



La Source Clinic and Nursing School in Lausanne, 1891. Photograph by Ossent-Portner.
©Archives Fondation La Source, Lausanne



Students from La Source Nursing School leaving the facility to give treatment to patients at home, Lausanne. Photograph from 1927.
©Archives Fondation La Source, Lausanne

1.2.3 Private clinics and medical tourism

²⁸ Pierre-Yves Donzé, Bâtir, Gérer, Soigner – *Histoire Des Établissements Hospitaliers de Suisse Romande*, Geneva: Georg Editeur, 2003, 164.

Private Clinics can be defined as “medical institutions that are not recognized by the State and have total independence in their management. Moreover, they usually cater to more privileged clients who can pay medical fees at their own expense.”²⁸ At the end of the 19th century, while cantonal hospitals were spreading across the territory, there were also smaller regional institutions which gave treatment to popular classes.

One can link the arrival of private clinics directly to the opening of the Faculty of Medicine and the considerable progress in the field that ensued. However, private clinics were also born thanks to the growing number of doctors and technical progress in the medical environment. Many well-known professors practiced privately alongside teaching and their reputed skills were highly sought after on a local and international scale. After the birth of Swiss tourism, and the establishment of a railway network, medical tourism began to develop in Switzerland. This included thermal bath tourism, with a rise in development projects such as luxurious hotels located near hot springs.²⁹ In the same vein as how more privileged patients could afford to receive medical treatment at home, medical tourists would receive treatment in hotels without having to go through any uncomfortable hospitalization. It was said that in the 1900s, the Beau-Rivage Hotel in Lausanne transformed itself into a true clinic.³⁰

²⁹ Ibid., 164-167.

³⁰ Guy Saudan. “La Faculté de Médecine de l’Université de Lausanne (1890): Un Pari Politique”. *Gesnerus : Swiss Journal of the History of Medicine and Sciences* 48, no. 3–4 (1991), 414.

Private clinics for specific clients started opening by the end of the 19th century. All the medical celebrities ran their own private clinics, many of which were of the most recent specializations such as surgery or ophthalmology. Furthermore, some private clinics like the Bois-Cerf Clinic of Louis Verrey favored Catholic staff so they could specifically target French Catholics passing by Lausanne, since most other clinics in the city possessed Protestant staff. Medical tourism was also present in the more mountainous regions of Switzerland with the establishment of sanatoriums for people with tuberculosis.³¹

³¹ Donzé, Pierre-Yves. Bâtir, Gérer, Soigner – *Histoire Des Établissements Hospitaliers de Suisse Romande*. Geneva: Georg Editeur, 2003, 167-170.

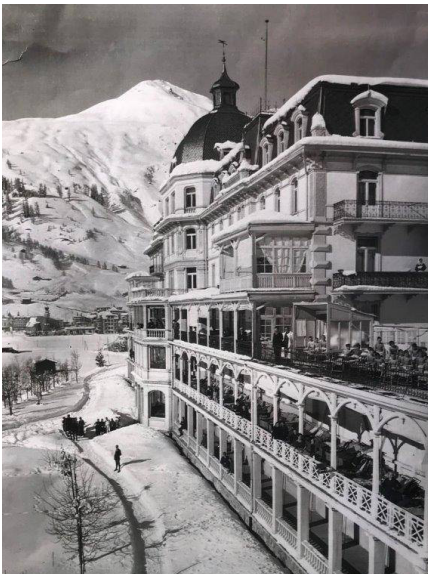
The General Clinic of Geneva was the product of doctors teaming up together to create an affordable clinic for the upper and middle class. One of the aims of the clinic was not to be luxurious but rather affordable to middle-class clients, so prices were adjusted accordingly. Local doctors with their own practices who had no access to the cantonal hospital gathered for a meeting in May 1898.

It was decided that they would altogether create the General Clinic for private clients. Since the facility would be a working tool for the doctors, they decided to accept most cases of illnesses, including those rejected in other places. Consequently, individuals with contagious diseases were admitted, as well as women giving birth. However, “the alienated” were rejected by difference of one vote.³²

³² Ibid., 167-170.

Until about 1914, private clinics seemed to be reserved for the elite, yet it is important to mention that they were in fact quite open to society. Many doctors working in these facilities kept a social conscience. Some offered free weekly consultations in their clinic’s practice, while other clinics would house indigent individuals or railroad workers. In addition, some subsidies were organized so people with a condition could get access to the care they needed. For instance, this was the case for people affected by tuberculosis who could also stay in the same sanatorium clinics as private clients, though usually in a different building.³³

³³ Ibid., 170.



Mythos Davos: Sanatorium Valbella, Davos, 1925. Photograph by Daniel Hess.
©Medizinmuseum Davos

Sanatorium and Thermal Baths in Vals, Switzerland. Advertising brochure for the Therme Vals Spa, May 1893.
Wikimedia Commons.



View of the Bois-Cerf Clinic, Lausanne, 1903. Edited by Steiner E. phot. in 1907. ©Musée Historique Lausanne



While in certain cantons, hospitals were powerful tools for the State such as Vaud, Geneva, and Fribourg, in others like Valais or Neuchâtel, the State was less implicated. However, this does not imply that there were no medical facilities available. As a matter of fact, there was much private funding, making it possible to create and sustain regional and paternalist infirmaries that were less costly. Moreover, at the end of the 19th century, trained doctors were not as many. Even with the innovations at the end of the century, there was still technical progress in the medical environment to be made, which then led to better hygiene, equipment and spaces for the staff and patients. In the following decades, hospitals evolved from being charitable institutions before World War I, to resembling company-run facilities.³⁴

³⁴ Ibid., 170-171.

1.2.4 Psychiatric facilities

Switzerland has long considered mental illnesses a medical issue, but also a social, political, and economic one. Like in many other countries, "the alienated" were kept in houses of correction during the 18th century, living under harsh conditions. Gradually the cruel and abusive inventions used to intimidate and constrain inmates disappeared. These included coercion chairs, straitjackets, surprise baths, chains, muffs, and sleeves.³⁵

In the 1820s there were big discussions among cantons such as Geneva and Vaud concerning asylums for people with mental illnesses, their planification and financing. In 1835, the canton of Vaud launched an international competition for an asylum which was won by the French architect Henri Labrousse but was then never built. In the 1870s, two major asylums were built with different typologies in Vaud and Fribourg. The first, located in the periphery of Lausanne, was the Cery Asylum. It was constructed in 1873 and had a monumental bloc typology with a U-shaped plan, the ensemble offering 500 beds. This project was not only a response to the medical needs of the population, but also a political intention for the canton's prestige.³⁶ The second major asylum was constructed in 1875 in the canton of Fribourg, the Marsens Asylum, a pavilion typology composed of autonomous "little bourgeois houses".³⁷

³⁵ Georges de Morsier, "Histoire de La Psychiatrie et de La Neurologie à Genève", *Gesnerus : Swiss Journal of the History of Medicine and Sciences* 34 (1977), 187. <https://doi.org/10.5169/seals-521007>.

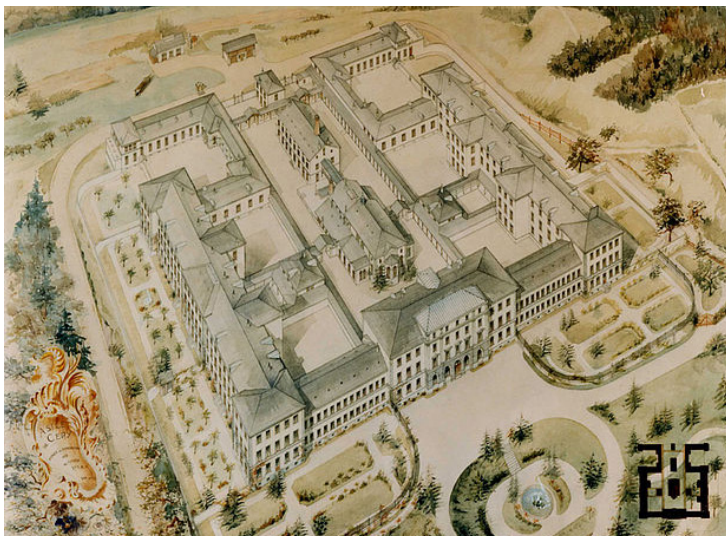
³⁶ Pierre-Yves Donzé, Bâtir, Gérer, Soigner – *Histoire Des Établissements Hospitaliers de Suisse Romande*, Geneva: Georg Editeur, 2003, 76.

³⁷ Paul Bissegger, Review of "Lieux de Folie : Monuments de Raison. Architecture et Psychiatrie en Suisse Romande", 1830-1930 (Fussing-er, Tevaearai)", *Traverse : Zeitschrift Für Geschichte* 7, no. 2 (2000), 170-171.

In Geneva, there was an annex building to the General Hospital named "House of Discipline" destined for "the alienated" in the 18th century. They were then transferred to the castle of Corsier from 1832 to 1838 due

to a cholera outbreak. Then, a new asylum opened in Vernets, in the countryside by the Arve. The facility soon became overcrowded and chaotic with terrible living conditions. It had a bad reputation and was often compared to a prison. The state took on the responsibility to solve the issue of a rising number of people with psychiatric illnesses and the lack of space to treat them. This led to the decision to create a new asylum in the canton of Geneva.³⁸ The first option was the creation of an asylum in the countryside on the plateau of Bel-Air. The second one was the establishment of a psychiatric clinic in the city of Geneva with a secondary facility in the countryside. The first of these two possibilities was largely favored.³⁹ An architectural competition for the building was launched in 1892 and won by the architect Henri Juvet. In 1900, the new asylum of Bel-Air opened. The facility was integrated into the university and cantonal hospital of Geneva (HUG) in 1995. It was then on known as the “Belle-Idée clinic”.⁴⁰

In the canton of Bern, the Breitfeld, located an hour away from the city gates, became a hospital ground during the Middle Ages. The location had been used as an infirmary for lepers. In 1749, the predecessor of the Waldau asylum, the “Tollhaus”, was constructed on the site. In 1855, the “Waldau lunatic asylum, sanatorium and nursing home” opened.⁴¹ The main building was designed as a four-wing facility with a central courtyard with similarities to a monastery layout.⁴²



Jacques Regamey. The Cery Mental Asylum near Lausanne, 1873.
©C. Bornand. 1990, Faculty of Medicine, UNIL.

³⁸ Georges de Morsier, “Histoire de La Psychiatrie et de La Neurologie à Genève”, *Gesnerus : Swiss Journal of the History of Medicine and Sciences* 34 (1977), 186-190. <https://doi.org/10.5169/seals-521007>.

³⁹ UNIGE. “Exposition Figures de l’ombre (Aliénés): Des Vernets à Bel-Air”. Accessed 29 October 2023. <https://www.unige.ch/fapse/figures-de-l-ombre/alienes/Vernets-Bel-Air>.

⁴⁰ Bibliothèque de Genève. “Hôpital de Psychiatrie de Belle-Idée, Aujourd’hui Intégré à La Clinique de Belle-Idée”. Accessed 29 October 2023. <https://bge-geneve.ch/iconographie/personne/hopital-de-psychiatrie-de-belle-idee-aujourd'hui-integre-la-clinique-de-belle-idee>.

⁴¹ Universitäre Psychiatrische Dienste Bern. “Geschichte Der UPD”. Accessed 26 October 2023. <https://www.upd.ch/de/ueber-uns/geschichte.php>.

⁴² Bachmann, Christian. “Zwangsjacken, Schockkuren, Stromstösse Und Psychopharmaka”. Accessed October 26, 2023. <https://www.srf.ch/wissen/mensch/mensch-zwangsjacken-schockkuren-stromstoesse-und-psychopharmaka>.

⁴³ Psychiatrische Universitätsklinik Zürich. "Zeitreise". Accessed 26 October 2023. <https://www.pukzh.ch/ueber-uns/zeitreise/>.

⁴⁴ Marietta Meier, *Der "Fall Hägi" am Zürcher Burghölzli: Zur Reaktion von Psychiatrie und Behörden auf Kritik an Staatlichen Anstalten*, University of Zürich, 2006, 239-257.

⁴⁵ Universitäre Psychiatrische Kliniken Basel. "Geschichte". Accessed 26 October 2023. <https://www.upk.ch/ueber-uns/klinikportrait/geschichte>.

Meanwhile in cantons like Zürich, the Grand Council decided to construct the Burghölzli asylum "to heal the insane" in 1864 on Willhem Griesinger's property. He had purchased this property thanks to public funds with the aim of creating a psychiatric hospital providing humane treatment. Griesinger, considered the founder of the Burghölzli asylum, was an important figure in the medical field of psychiatry and believed mental illness was of biological cause. Six years later, the facility was opened on the outskirts of the city of Zürich with Bernhard von Gudden as first medical director and full-time professor of psychiatry at the University of Zürich.⁴³ In 1894, a former guard named Gottlieb Hägi published a document with complaints and criticism concerning the state-run asylum touching upon the subject of conditions within the facility, the management, and authorities. It became widely read and gave the authorities the drive to improve the situation.⁴⁴

In 1882, Basel's Grand council along with the civic hospital and sanitary department, decided to build a new "lunatic asylum" in a meadow out of the city, known as Friedmatt. Four years later, in 1886, the "Friedmatt Lunatic Asylum" was opened with 214 beds available.⁴⁵



View of the Waldau Psychiatric Clinic in Bern-Ostermündigen, 1965.
©ETH Library Zürich, Image archive. Photograph by Comet Photo AG (Zürich), Com_F65-05796 / CC BY-SA 4.0.
<http://doi.org/10.3932/ethz-a-000056319>.



View of the Burghölzli complex, Psychiatric University Hospital of Zürich, 1966.
©ETH Library Zürich, Image archive. Photograph by Comet Photo AG (Zürich), Com_F66-07175 / CC BY-SA 4.0.
<http://doi.org/10.3932/ethz-a-000244095>.



View of the Friedmatt complex, Psychiatric University Hospital of Basel, 1952. ©ETH Library Zürich, Image archive / Swiss Aerial Photography Foundation. Photograph by Werner Friedli, LBS_H1-014379 / CC BY-SA 4.0. <http://doi.org/10.3932/ethz-a-000356440>.



View of the Krombach complex, Psychiatric Hospital of Appenzell Ausserrhoden in Herisau, 1947. ©ETH Library Zürich, Image archive / Swiss Aerial Photography Foundation. Photograph by Werner Friedli, LBS_H1-009779 / CC BY-SA 4.0. <http://doi.org/10.3932/ethz-a-000351917>.

Swiss asylums were led by chief psychiatrists. The previously mentioned facilities in Basel, Bern, Geneva, Lausanne, and Zürich were the Swiss university psychiatric facilities available at the time. Today, they have evolved and have been transformed into modern university psychiatric hospitals. One can observe that there was a tendency to build these psychiatric asylums on the outskirts of the city, isolating individuals deemed “insane”. Infirmaries also played their part as asylums to deal with social issues from the authorities. Some possessed cells to confine patients that were either arrested by the police or exhibiting aggressive and violent behavior. Some specialized infirmaries also housed people with serious alcoholic tendencies. Finally, even though it was not authorized, they also took on the role of asylums for the elderly and profited from the economic benefits of accommodating these people through their residential services.⁴⁶

⁴⁶ Pierre-Yves Donzé, *Bâtir, Gérer, Soigner – Histoire Des Établissements Hospitaliers de Suisse Romande*, Geneva: Georg Editeur, 2003, 120.

Towards the end of the 19th century, construction of private psychiatric clinics such as Klinik Littenheid or Sanatorium Kilchberg began. It was also around this time that the Swiss flourished in scientific psychiatric findings and theories that were shared on a global scale. Swiss psychiatrists began to play important roles as experts in their own discipline in the Swiss judicial system and the army. In addition, they became more solicited by

⁴⁷ Catherine Fussinger, Urs Germann, Martin Lengwiler, "Ausdifferenzierung der Psychiatrie in der Schweiz: Stand und Perspektive der Psychiatriehistorischen Forschung", *Traverse : Zeitschrift Für Geschichte* 10, no. 1 (2003), 25-26.

⁴⁸ Ibid., 26.

⁴⁹ Eichenberger, Isabelle. "Recognising Switzerland's Slave Children". Accessed 26 October 2023. https://www.swissinfo.ch/eng/a-dark-chapter-in-history_recognising-switzerland-s--slave-children-/35429120.

⁵⁰ Conseil Fédéral. "Internements administratifs: La réhabilitation des personnes concernées ne fait que commencer". Accessed 26 October 2023. <https://www.admin.ch/gov/fr/accueil/documentation/communiqués.msg-id-76236.html>.

⁵¹ Commission indépendante d'experts (CIE), *Visages de l'Internement Administratif: Portraits de Personnes Concernées*, Neuchâtel: Editions Alphil, 2019, 53.

cantonal authorities for managing and controlling crime within the canton in a more efficient way. They also collaborated closely with architects and politicians for the planning and construction of new psychiatric facilities.⁴⁷

In the 20th century, mental health services evolved along with the latest research. Some studies even concerned the evolution of environmental factors and mental illnesses outside the hospital realm. This had a major influence on treatments proposed to patients since the 1970s. It was possible for patients to pursue their lives within the community without having to be hospitalized. Other methods in psychiatric services were introduced such as foster care. This made psychiatry a field at risk of losing competences. Even though psychiatrists at the time insisted on the fact that caregivers should have some specialized knowledge in psychiatry, this was not always the case and consequently, unexperienced institutions took care of people with psychiatric illnesses.⁴⁸

1.2.5 Administrative care

Administrative care during the 20th century is a dark chapter in Switzerland's history. According to experts from the CIE, around 60'000 individuals were locked up in different types of institutions without having committed any crime or gone through trial. It is estimated that there were about 648 institutions in Switzerland inhabited by these marginalized individuals deemed abnormal or whose lifestyles did not fulfill the authorities' expectations. They were considered being either lazy, insane, debauched, alcoholic, poor, rebellious people or were unmarried teenage mothers. Some people were forced to give away their children for adoption and were sometimes castrated or sterilized.⁴⁹ Others were incarcerated along with imprisoned criminals, put in foster homes or interned in psychiatric hospitals until the 1980s.⁵⁰ They were also exploited and used as cheap forced labor. It is often in these settings that they were subjected to mental and physical abuse that would haunt them for the rest of their lives.⁵¹

There was a large difference between cantonal laws concerning administrative care and the level of detention varied between cantons. For example, in the canton of Fribourg, they integrated a new law for taverns to fight against alcoholism. In some other cantons, they relied mostly on

the guardianship law that came into force in the 1912 Civil Code. In the canton of Vaud, internments would be pronounced by a commission while in the canton of Fribourg, it was decided by one person, the prefect. It is only in 1981 that the new federal regulations revoked the cantonal laws and regulated these arbitrary guardianships. The framework was finally in line with the European Convention on Human Rights (ECHR) and there was then on a possibility to appeal.⁵²

In terms of mental health services, inpatient services later became more decentralized. Outpatient services were also made available and accessible to communities from different regions. To destigmatize mental health and better integrate people with mental health illnesses, there was a general trend to shorten psychiatric hospitalizations and promote outpatient services in intermediate structures.⁵³ The reform in the late 20th century included the normalization of mental health, a focus on the patient's needs with adapted treatment and integration into the community. These elements are still very important and relevant today, especially with Switzerland's goal to increase psychiatric outpatient services and shift towards a more community-based mental healthcare.⁵⁴

⁵² SWI. "Environ 60'000 Personnes ont été internées en Suisse au 20e Siècle." Accessed October 26, 2023. <https://www.swissinfo.ch/fr/toute-l-actu-en-bref/environ-60-000-personnes-ont-%C3%A9t%C3%A9-intern%C3%A9es-en-suisse-au-20e-si%C3%A8cle/44973710>.

⁵³ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)", 11 March 2016, 23-24.

⁵⁴ Hans Christian Kuhl, "Stationäre Psychiatrie in der Schweiz 2000–2006", Arbeitsdokument 31, Neuchâtel: Schweizerisches Gesundheitsobservatorium (OBSAN), November 2008, 13-14.

1.3 The evolution of mental healthcare in Switzerland

Current models

Switzerland today possesses a psychiatric care system that can be divided into the three following structures:

1.3.1 Outpatient care

Outpatient care consists of basic medical psychiatric care for people with a mental illness. It is most suitable for individuals with a new mental health condition or those who are relatively stable and independent with the need of some assistance. Patients can either be treated by their family doctor, a psychiatrist, or a psychotherapist. In Switzerland, many independent specialists choose to locate themselves in city centers or urban agglomerations. This leaves some rural areas with less direct access to this type of care and requires them to travel to the city. In some Swiss cities, it is common to find outpatient care services that are always open or even mobile teams that can travel to someone in urgent need.

⁵⁵ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stäehelin (10.3255)", 11 March 2016, 28-30.

However, it seems that in more rural areas, local doctors must often call a psychiatrist in case of emergency.⁵⁵

1.3.2 Intermediate care

Intermediate care can be seen as a service that fills the gap between regular consultations at the doctor's practice and inpatient care, which is always available. In Switzerland, this type of mental health care can be mainly found in the form of two models: the day hospital, also known as day clinic or center and the outpatient center.

Day clinics

Day clinics are mostly for people who have a mental illness in an acute or subacute phase. These centers are open during the day on working days only, so patients spend their nights and weekends in their regular environment. During the day they can go as often as necessary to the clinic, ranging from once a day to once every week. The proposed therapeutic methods usually consist of one-to-one psychotherapy sessions, group therapy, social competence training, emotional regulation, stress management, relaxation techniques, meditation, ergotherapy and work preparation. Other forms of therapies include art-therapy and musicotherapy.⁵⁶

⁵⁶ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stäehelin (10.3255)", 11 March 2016, 33-35.

⁵⁷ HUG. "Pluriprofessionnels de Santé: Mission". Accessed 31 October 2023. <https://www.hug.ch/pluriprofessionnels-sante/mision-lieux-art-therapeutes>.

Art therapy is a treatment method which enables a person to use the medium of art as individual expression, an alternative to using speech. Activities such as drawing, painting, pottery, dancing, playing a musical instrument or singing as well as acting are often proposed.⁵⁷

⁵⁸ HUG. "Pluriprofessionnels de Santé: Mission". Accessed 31 October 2023. <https://www.hug.ch/pluriprofessionnels-sante/musicotherapie-mission>.

Musicotherapy consists of using music or sound in a therapeutic or educative way. Music, another form of language, has long been proven to influence people in sensory and emotional ways. The goal is to create an interaction between the patient and music, to establish connections as well as the recognition and control of emotions.⁵⁸

Alternative therapies which have been on the rise in mental health facilities, elderly nursing homes and schools involve the interaction of individuals with domestic animals such as cats and dogs. We can distinguish two animal programs for patients: animal assisted therapy (AAT) and animal assisted activity (AAA). AAT is more organized than AAA. The latter is

often done in groups of patients in a more spontaneous fashion without a specific duration nor activity. AAT is stricter with the time frame and type of activity targeted to the patient's condition. It is also conducted by a trained handler and animal. These animal assisted interventions have been popular among younger patients and have shown benefits among psychiatric and cancer patients. Studies have shown that there was major improvement in autism-spectrum symptoms, behavioral problems, and overall emotional well-being. These interventions present many benefits but there are naturally risks of implementing these in medical facilities. However, with correct knowledge, careful sanitary measures, and training, they can be effective strategies for improving the well-being of patients.⁵⁹

Horticultural therapy programs for patients affected by depression, anxiety or schizophrenia have also been implemented in some day clinics. They enable patients to feel accomplished, focused, and responsible through caring for plants as well as using their problem-solving skills. In addition, as these are usually group activities, they can help with socialization. Horticultural therapy sessions have proven to enhance self-esteem, improve mood and decrease stress levels.⁶⁰

Day hospitals for children and adolescents often include integrated specialized schools or academic support services, helping them in their education.⁶¹ For adult patients, work coaching sessions are provided to help patients with work reintegration or to find a job.⁶²

All in all, day hospitals play a big part in patients' lives, as they offer support and treatment, but also ensure social, educational, or professional integration.⁶³ In many cases, day clinics are the places for facilitating the transition from an inpatient center to one's home.

Outpatient centers

Outpatient centers provide care and consultation services. They are most often linked to institutions like somatic hospitals, readaptation centers or social medical centers. Multidisciplinary teams are also available on site for consultations, advice, and case management. Case management is a recent type of outpatient mental health service that functions with other institutions such as other involved specialists, employers, insurance companies or educators. Personalized support is given to a patient for a

⁵⁹ Fabrizio Bert, Maria Rosaria Gualano, Elisa Camussi, Giulio Pieve, and Gianluca Voglino. "Animal Assisted Intervention: A Systematic Review of Benefits and Risks". *European Journal of Integrative Medicine* 8, no. 5 (October 2016), 695-699. <http://dx.doi.org/10.1016/j.eujim.2016.05.005>.

⁶⁰ Janet Szofran and Susan Meyer. "Horticultural Therapy in a Mental Health Day Program". *Journal of Therapeutic Horticulture* 15 (2004): 33-34.

⁶¹ Département de psychiatrie CHUV. "Centre Thérapeutique de Jour pour Adolescents (CTJA)". Accessed 23 November 2023. <https://www.chuv.ch/fr/fiches-psy/centre-therapeutique-de-jour-pour-adolescents-ctja>.

⁶² Psychiatrische Dienste Aargau (PDAG). "Work Coaching". Accessed 23 November 2023. <https://www.pdag.ch/fuer-patientinnen-patienten-und-angehoerige/alte-angebote/arbeitscoaching>.

⁶³ Haut-Valais Psychiatric Center. "Adult Day Clinic". Accessed 23 October 2023. <https://www.valaishospital.ch/specialities-from-a-to-z/specialities-from-a-to-z/psychiatry-and-psychotherapy/haut-valais-psychiatric-centre/adult-day-clinic>.

⁶⁴ HUG. "HÔPITAL PSYCHIATRIQUE : LE PARCOURS PATIENT". Accessed 21 October 2023. <https://www.hug.ch/psychiatrie-adulte/hopital-psychiatrique-parcours-patient>.

⁶⁵ Spital Emmental. "Intensive Case Management". Accessed 23 October 2023. https://www.spital-emmental.ch/Intensives_Case-Management.

⁶⁶ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)", 11 March 2016, 33-36.

⁶⁷ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)", 11 March 2016, 37-40.

⁶⁸ ISFM. "Titres de Spécialiste et Formations Approfondies (Formation Postgraduée)". Accessed 19 October 2023. <https://www.siwf.ch/fr/formation-postgraduee/titres-specialiste-formations.cfm>.

certain amount of time (months or years depending on the situation). The aim is to empower and rehabilitate patients with a mental illness by giving them a sense of autonomy in managing their condition and everyday life. The weeks after being discharged from the hospital have shown to be a period of high risk in disorder relapse, readmission, or suicide. The connection to outpatient care is lacking and so a few years ago, some hospitals have integrated "transition case management" to ensure a smoother transition between the hospital and one's own home.⁶⁴ Intensive case management is another type of program for individuals with severe mental illnesses which hinder their quality of life. The programs can last several years with a frequency that depends on the person's needs.⁶⁵ If a patient requires treatment, the patient will be sent to see a specialist or transferred to a day clinic. They could even be sent to a hospital depending on the case. In some extraordinary situations, patients can be allowed to stay for a longer period. It is interesting to note that mobile crisis intervention teams exist in mental healthcare. They offer assistance and support to individuals in need. This is an alternative solution to a hospital admission.⁶⁶

1.3.3 Inpatient care

Inpatient care is available for individuals 24 hours a day and 7 days a week. These usually consist of psychiatric clinics or psychiatric units in general hospitals with an emergency center. Patients who require this service stay overnight in these infrastructures while receiving treatment. They are most often admitted and treated for the following reasons: being in an unstable condition, possessing a serious psychiatric illness, putting others or themselves in danger or requiring very specialized therapy. In addition, if outpatient care is not enough to help them nor brings any improvement to their mental state, then they can also become an inpatient.⁶⁷ Since psychiatry is a vast and complex field, doctors can specialize and focus on specific conditions or category of ages. In Switzerland, the following specializations that can be pursued:

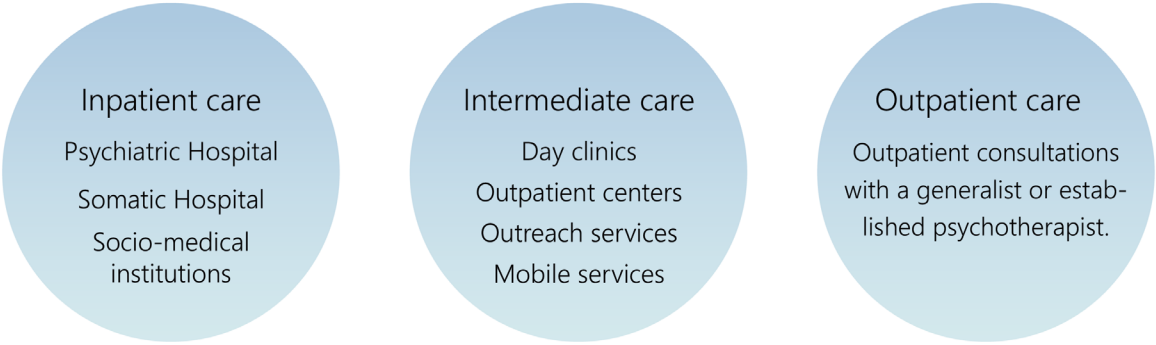
- Geriatric psychiatry
- Consultation-liaison psychiatry
- Addiction psychiatry
- Forensic psychiatry
- Child and adolescent psychiatry⁶⁸

While more specialized divisions exist, mental health centers or clinics generally focus on one or several of the previously mentioned conditions or age categories. In spatial terms, it is not uncommon to find related divisions. This can be through units or specialized centers for instance, since not all patients with different mental illnesses, case severity, behaviors and outlooks on life can be mixed into the same space.⁶⁹

⁶⁹ Appendix 1, Interview with Dr. Flavio Ungarelli, 120.

According to the Swiss Confederation’s report on the future of psychiatry in Switzerland, one of the national aims in mental health care is to improve the coordination between the different types of cares and their quality. Another important goal is to promote case management, the collaboration between different institutions related to mental health care. Finally, there is also a strong will and necessity to increase intermediate care offers through sustainable financing.⁷⁰

⁷⁰ Confédération Suisse, “Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)”, 11 March 2016, 42.



Types of mental healthcare services in Switzerland.

2

TERRITORY

2. TERRITORY

2.1 Mental health in Switzerland

Mental health within the Swiss population has deteriorated considerably compared to before the COVID-19 pandemic. The results of the “Mental Health - 2022 Fall Survey” published in 2023 by the OBSAN reveal that there is a higher percentage of people with moderate to severe symptoms of depression (12%) and there are fewer very happy or satisfied individuals. Moreover, 35% of the Swiss resident population that participated in the survey experienced mental health problems in the last 12 months. The most frequent symptoms include moderate to severe symptoms of depression, anxiety disorder, eating disorder and social phobia. Furthermore, 1 in 8 people present more severe symptoms of mental health illness such as suicidal thoughts, suicide attempts, self-harm, or daily restrictions. Only a third of the affected people seek help for suicidal thoughts, while after a suicide attempt, more than 40% of the affected people are not followed by a specialist.⁷¹

⁷¹ Claudio Peter, Alexander Tuch, and Daniela Schuler. “Psychische Gesundheit – Erhebung Herbst 2022. Wie geht es der Bevölkerung in der Schweiz? Sucht sie sich bei Psychischen Problemen Hilfe?” Obsan Bericht 03/2023. Neuchâtel: Schweizerisches Gesundheitsobservatorium (OBSAN), 2023, 55-56.

2.2 Challenges

There is currently a lack of information on outpatient and intermediate mental healthcare structures for all age categories in Switzerland, thus making it a complex task to keep track of their evolution. The models and organization related to these different types of care also vary from canton to canton, so it is difficult to compare their infrastructures. Moreover, epidemiological data is not available for many specific areas or regions of the country, therefore making it challenging to pinpoint exactly where new mental health infrastructures would be needed.⁷²

⁷² Appendix 2, Correspondence with Claudio Peter (OBSAN), 124.

However, the Swiss Conference of Cantonal Directors of Public Health (GDK) have been cooperating with the federal authorities to address a pressing national issue, which is the current lack of mental health services available for children and adolescents. In recent years, the Swiss Confederation requested studies be conducted to improve the situation for this target group. These include a report on transitional psychiatry conducted by the Zürich University of Applied Sciences (ZHAW)⁷³ and one on the care pathways in psychiatric care for children and adolescents conducted by the School Psychological Services (SPD) in Basel.⁷⁴ The GDK organized a meeting with the cantons in September 2022 to discuss the results of

⁷³ Agnes von Wyl, Erica Chew Howard, Laura Wade-Bohler, Silvia Passalacqua, Larissa Schneebeli, Patrick Haemmerle and Andreas Andrae. “Stationäre und tagesklinische Angebote der psychiatrischen Gesundheitsversorgung an der Schnittstelle des Jugend und Erwachsenenalters in der Schweiz: Eine Bestandesaufnahme bestehender Angebote im Auftrag des BAG”. Zürich: Zürich University of Applied Sciences (ZHAW), 2020.

⁷⁴ Letizia Wyss and Karin Keller. “Versorgungspfade in der Psychiatrisch-Psychotherapeutischen Versorgung von Kindern und Jugendlichen”. Bern: Federal Office of Public Health (FOPH), 2020.

⁷⁵ Bundesamt für Gesundheit (BAG). "Psychiatrische Versorgung: Kinder und Jugendliche". Accessed 7 November 2023. <https://www.bag.admin.ch/bag/de/home/strategie-und-politik/politische-auftraege-und-aktionsplaene/politische-auftraege-im-bereich-psychische-gesundheit/postulat-massnahmen-im-bereich-psychische-gesundheit1/kinder-und-jugendliche.html>.

the survey and short-term implemented strategies to improve the situation. It was revealed that many cantons have increased the number of inpatient beds for children and adolescents. Furthermore, there has been a particular effort made to increase the number of job positions in intermediate care. Finally, prevention on a national scale has also been improved. While some considerable improvements have been made, there remains a lack of offer in mental health services for young people on a national scale, be it inpatient, intermediate or outpatient care. The federal government is pursuing its action plan to tackle this issue and is carefully monitoring the development of psychiatric care for children and adolescents in the country.⁷⁵

2.3 Intermediate care

⁷⁶ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)", 11 March 2016, 52-53.

Inpatient and outpatient psychiatric care are still very dominant within the different cantons, while intermediate care is incomplete. However, there has still been some evolution worth mentioning: the number of intermediate care infrastructures has doubled from 2006 to 2016. Moreover, the number of consultations in intermediate care between 2004 and 2014 have doubled as well as its costs. Some local pilot projects in recent years have proposed better suited treatments to patients' needs, yet their influence on other cantons remains very restricted. Necessary financing of intermediate care depends on the canton and its promotion. This is still a challenge since the costs for the organization and management of intermediate care are higher than the typical outpatient care model.⁷⁶

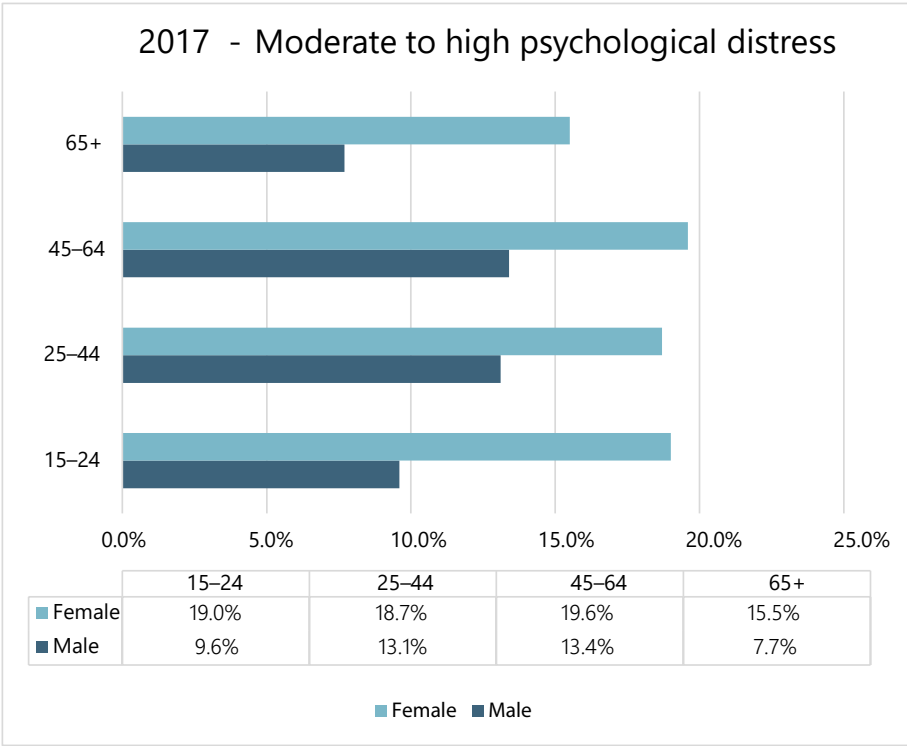
2.4 Mental health of children and adolescents

⁷⁷ Deniz Kilicel, Franco De Crescenzo, Remy Barbe, Anne Edan, Logos Curtis, Swaran Singh, Jean-Michel Aubry, Jacqueline Mégevand, Stephan Eliez, Kerstin Jessica Plessen, Marco Armando, "Mapping Child and Adolescent Mental Health Services and the Interface during Transition to Adult Services in Six Swiss Cantons", edited by Alexis Revet, *Front Psychiatry* 13, no. 814147, 9 May 2022, 2. doi: 10.3389/fpsyt.2022.814147.

A problem Switzerland will be faced within the next five years is the lack of specialists who are important for the functioning of mental health-care, such as psychiatrists or psychotherapists, especially for children and adolescents. This is quite alarming considering the 43% increase in the number of outpatient public health consultations in simply six years (2012-2018), a timeframe before the COVID-19 pandemic.⁷⁷ The pandemic has indeed accentuated the lack of mental healthcare for children and adolescents especially. In fact, between 2020 and 2021, 10- to 24-year-old individuals, mainly young girls and women have been particularly impacted. Hospitalizations for mental disorders and behavioral issues increased by 26% in women for this age range, while it increased by 6% for men.

Hospitalizations due to suicide attempts also increased by 26% for people in this age range. Mental health issues were for the first time the number one cause of hospitalizations in Switzerland for people aged 10 to 24. In addition, outpatient psychiatric services for these individuals increased by 19% during this period.⁷⁸ The results of the OBSAN 2022 report show an alarming mental distress among children, adolescents, and young adults. Some of this evolution is partially due to the pandemic, however there were already some visible trends before 2020.⁷⁹

Another observation that has been made is the rise in feelings of loneliness within the population, especially among younger people aged from 15 to 24 years old. While in 2017, 5% of people were concerned, the OBSAN survey statistics from fall 2022 show this percentage has risen to 14%. The following graphs show the percentage of psychological distress among the Swiss population (moderate to high levels) in 2017 and 2022. The results from 2022 show a significant increase in psychological distress among young people aged 15 to 24. The older the age categories, the better mental health they presented.⁸⁰



⁷⁸ OFS, “Communiqué de Presse 12.12.2022: Troubles Mentaux: Hausse sans Précédent des Hospitalisations pour les Jeunes Femmes de 10 à 24 Ans”. Accessed 20 October 2023. <https://www.bfs.admin.ch/bfs/fr/home/statistiques/catalogues-banques-donnees.assetdetail.23772012.html>.

⁷⁹ Daniela Schuler, Alexander Tuch, Isabelle Sturny, Claudio Peter. “Santé Psychique: Chiffres clés et impact du COVID-19”. Neuchâtel: Observatoire suisse de la santé (Obsan Bulletin 02/2022), 8.

⁸⁰ Claudio Peter, Alexander Tuch, and Daniela Schuler. “Psychische Gesundheit – Erhebung Herbst 2022. Wie geht es der Bevölkerung in der Schweiz? Sucht sie sich bei Psychischen Problemen Hilfe?” Obsan Bericht 03/2023. Neuchâtel: Schweizerisches Gesundheitsservatorium (OBSAN), 2023, 3-11.

Data source: ©OFS 2023 – Enquête suisse sur la santé (ESS) / Swiss health survey.

2017 - Moderate to High Psychological Distress.

⁸¹ Elvira Tini. "Zukunft der Kinder- und Jugendpsychiatrie". Schweizer Zeitschrift für Psychiatrie & Neurologie 02/2022 PSYCHIATRIE+NEUROLOGIE (22 April 2022): 18–22.

⁸² World Health Organization (WHO). "World Mental Health Report: Transforming Mental Health for All", 2022, 14. <https://www.who.int/publications/i/item/9789240049338>.

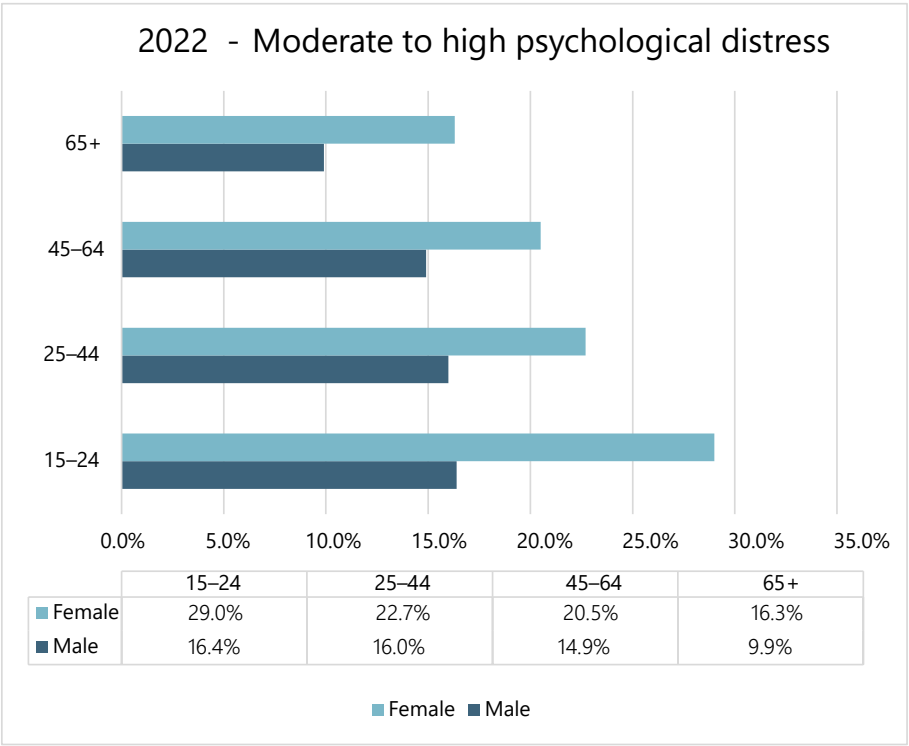
⁸³ Elvira Tini. "Zukunft der Kinder- und Jugendpsychiatrie". Schweizer Zeitschrift für Psychiatrie & Neurologie 02/2022 PSYCHIATRIE+NEUROLOGIE (22 April 2022): 19.

With mental health in children and adolescents deteriorating at an accelerated pace, it has gained more presence in the media and in the political realm these last few years.⁸¹ The question of the future of mental health for this age group is critical to consider given the circumstances. The earlier mental health disorders are identified, the sooner treatments can begin, targeting developmental stages during childhood or adolescence. In fact, it is often during adolescence, a key formative time in one's life, that mental health conditions begin and can perpetuate into adulthood.⁸² Therefore, treating mental health illnesses when detected earlier on (during childhood or adolescence) can have a major impact on an individual's mental health situation in adulthood.

Child and adolescent psychiatry in Switzerland favors outpatient care before inpatient care. To tend to the shortcomings this model might bring, new and innovative care schemes should be proposed and tested. For example, some university hospitals have proposed new concepts such as home treatment, follow-up treatments at home after an inpatient admission and more integrative concepts.⁸³

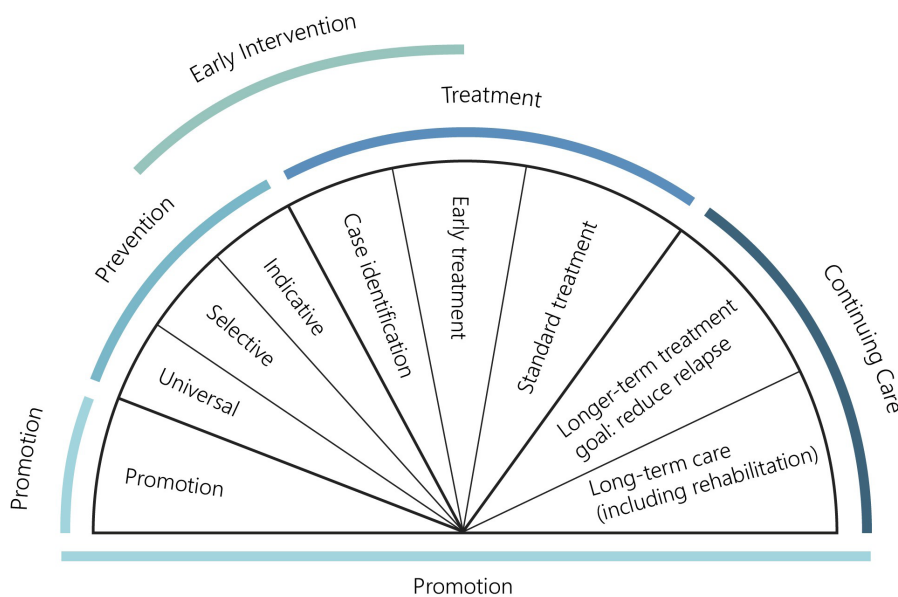
Data source: ©OFS 2023 – Enquête suisse sur la santé (ESS) / Swiss health survey.

2022 - Moderate to High Psychological Distress.



The stigma of mental illness among young people is still present today. Public awareness campaigns, advice for parents and children, targeted information on counselling and therapy, as well as easier access to mental health facilities could help in reducing the reluctance to seek help. Indeed, the location of mental healthcare services and how accessible they are to younger generations are important to consider. Moreover, interconnecting school psychology with therapeutic services close to schools or integrating them into schools could help not only in identifying a mental health condition earlier, but also help break the stigma of mental illness.⁸⁴

⁸⁴ Letizia Wyss and Karin Keller. "Versorgungspfade in der Psychiatrisch-Psychotherapeutischen Versorgung von Kindern und Jugendlichen". Bern: Federal Office of Public Health (FOPH), 2020, 35-36.



The mental health intervention spectrum for mental disorders.

Adapted from:
Institute of Medicine (US)
Committee on Prevention of
Mental Disorders. *Reducing
Risks for Mental Disorders:
Frontiers for Preventive Inter-
vention Research*. Edited by
Patricia J. Mrazek and Robert
J. Haggerty. Washington DC:
National Academies Press,
1994, 23.

Shockingly, a recent investigation in Switzerland has been brought to light and precisely shows the lack of psychiatric care for young people within the country. The affected individuals have no parents nor caregivers to look after them and require therapy. However, because of the lack of mental health treatment spaces and homes, these minors have been placed in prisons as a "temporary solution" while being perfectly innocent. While it may provide them with shelter and food, this is also legally controversial. There is an urgent need for action to offer these young people more comfortable and therapeutic spaces with a proper education. Given the lack of institutions, centers, and homes for young women, they have been especially affected. As Martina Caroni, the president of the National Commission for the Prevention of Torture stated, "young

⁸⁵ Andreas Schmid. "Umstrittene Kesb-Praxis: Jugendliche landen Unschuldig im Gefängnis." SRF4 News aktuell. Accessed November 23, 2023. <https://www.srf.ch/news/schweiz/umstrittene-kesb-praxis-jugendliche-landen-unschuldig-im-gefaengnis>.

⁸⁶ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)", 2016, 53.

⁸⁷ Elvira Tini. "Zukunft der Kinder- und Jugendpsychiatrie". *Schweizer Zeitschrift für Psychiatrie & Neurologie* 02/2022 PSYCHIATRIE+NEUROLOGIE (22 April 2022): 22.

⁸⁸ World Health Organization (WHO). "Coming of Age: Adolescent Health". Accessed 7 November 2023. <https://www.who.int/news-room/spotlight/coming-of-age-adolescent-health>.

people who have not come into contact with the criminal law have no place in prison".⁸⁵ The reality we are facing proves there is an alarming need for psychiatric facilities and homes for younger people in Switzerland and it is necessary to act today.

In summary, mental health services for children and adolescents in Switzerland are insufficient and require improvement.⁸⁶ Inpatient and outpatient services should be better equipped and fitted to the needs of this age category. There should also be better networking between pediatric and adolescent medicine, children and adolescent psychiatry and interdisciplinary wards or outpatient centers. Innovative care models are needed, including more staff support in handling case management. Finally, the promotion of early mental health illness diagnosis should be pursued, as it can lead to a better prognosis for the concerned individual.⁸⁷

A mental health expert from the WHO, Dr. Tarun Dua, made the following statement about why the mental health of children and adolescents should not be neglected: "Half of mental health disorders arise before the age of 14. If these are left untreated, they extend into adult life, thus impacting educational attainment, employment, relationships or even parenting."⁸⁸

2.5 Cantonal plans

Every canton of Switzerland can plan its mental health care program under the global supervision of the Confederation and coordinate with other cantons. Each canton also manages its own finances, spatial resources, and staff.⁸⁹ In the last decade, the number of consultations, days of care and overall costs have increased in all three structures of psychiatric care in the country. Inpatient hospitalizations have increased, but the duration of stay has decreased so there are clearly less long-stay patients compared to previous years.⁹⁰

Through thorough analysis of cantonal plans in psychiatric care, the findings show that outpatient and intermediate care have not yet been integrated in all cantons. The cantons who participated in the situational analysis from 2012 strongly encouraged the development in ambulatory and intermediate structures as there is currently a lack of these structures.

The same report also indicated the fact that half of the participating cantons have integrated psychiatric inpatient care in their hospital planning, while the others have their distinct way in planning psychiatric care. Thirteen cantons possess a psychiatric care plan which incorporates not only the core principles and outlook, but also treatment goals and a better offer of diverse care. Moreover, most cantons possess psychiatric clinics (three to four each), but four cantons in 2012 did not have any. This is not dependent on the canton's size.⁹¹

The cantons who do not possess any psychiatric clinic today often cooperate with a neighboring canton. For example, psychiatry in the cantons of Obwalden and Nidwalden has been operated by Luzern psychiatry since 2017 after the signature for a joint psychiatric care region.⁹² The cantons of Uri, Schwyz and Zug also settled an agreement for intensive cooperation in psychiatric treatment.⁹³ Since 2018, the three cantons ensure a basic mental healthcare with inpatient care, intermediate care as well as outpatient psychiatric and psychotherapeutic services for the region.⁹⁴

The second map on the next page shows the concentration of different types of psychiatric structures in Switzerland: inpatient, intermediate or outpatient. In most cases, cantonal mental health hospitals will offer inpatient services, but also intermediate care and emergency services.

⁸⁹ Deniz Kilicel, Franco De Crescenzo, Remy Barbe, Anne Edan, Logos Curtis, Swaran Singh, Jean-Michel Aubry, Jacqueline Mégevand, Stephan Eliez, Kerstin Jessica Plessen, Marco Armando, "Mapping Child and Adolescent Mental Health Services and the Interface during Transition to Adult Services in Six Swiss Cantons", edited by Alexis Revet, *Front Psychiatry* 13, no. 814147, 9 May 2022, 2. doi: 10.3389/fpsy.2022.814147.

⁹⁰ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)", 11 March 2016, 42-43.

⁹¹ Ibid., 42-43.

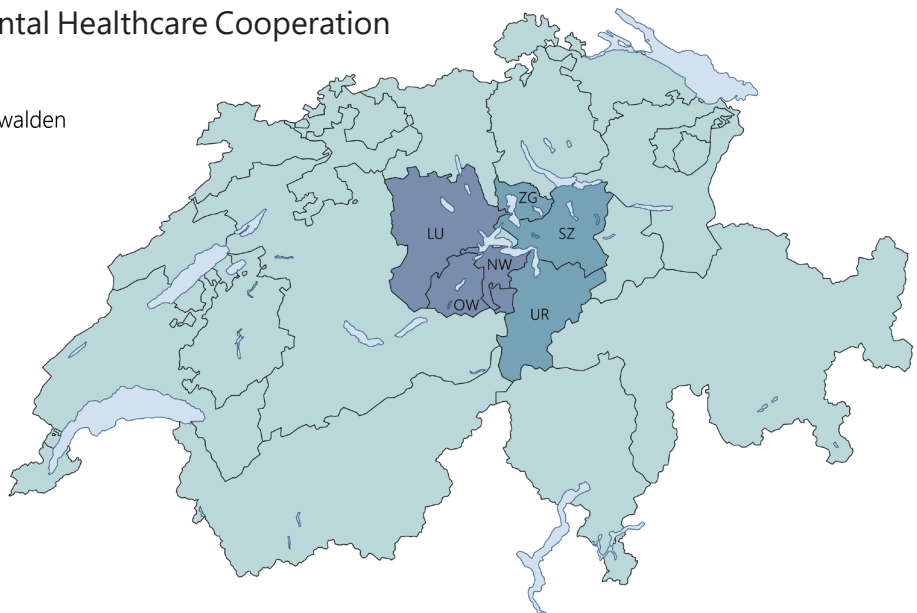
⁹² Kanton Nidwalden. "Psychiatrie: Drei Kantone - Eine Versorgungsregion. Luzern, Obwalden und Nidwalden Gehen in der Psychiatrie seit dem Jahre 2017 Gemeinsam Neue Wege." Accessed 21 October 2023. <https://www.nw.ch/gesodirektions-sekrdienste/4514>.

⁹³ Kanton Zug. "BGS 826.162 - Konkordat der Kantone Uri, Schwyz und Zug betreffend die Psychiatrische Versorgung (Psychiatriekonkordat)". Accessed 21 October 2023. https://bgs.zg.ch/app/de/texts_of_law/826.162.

⁹⁴ Integrierte Psychiatrie Uri, Schwyz, und Zug. "Psychiatrische Versorgung über Drei Kantone". Accessed 21 October 2023. <https://www.triapius.ch/ueber-uns/triapius-ag/ueber-triapius>.

Switzerland - Cantonal Mental Healthcare Cooperation

- Individual
- lups-ON: Luzern, Obwalden, Nidwalden
- Triaplus: Uri, Schwyz, Zug

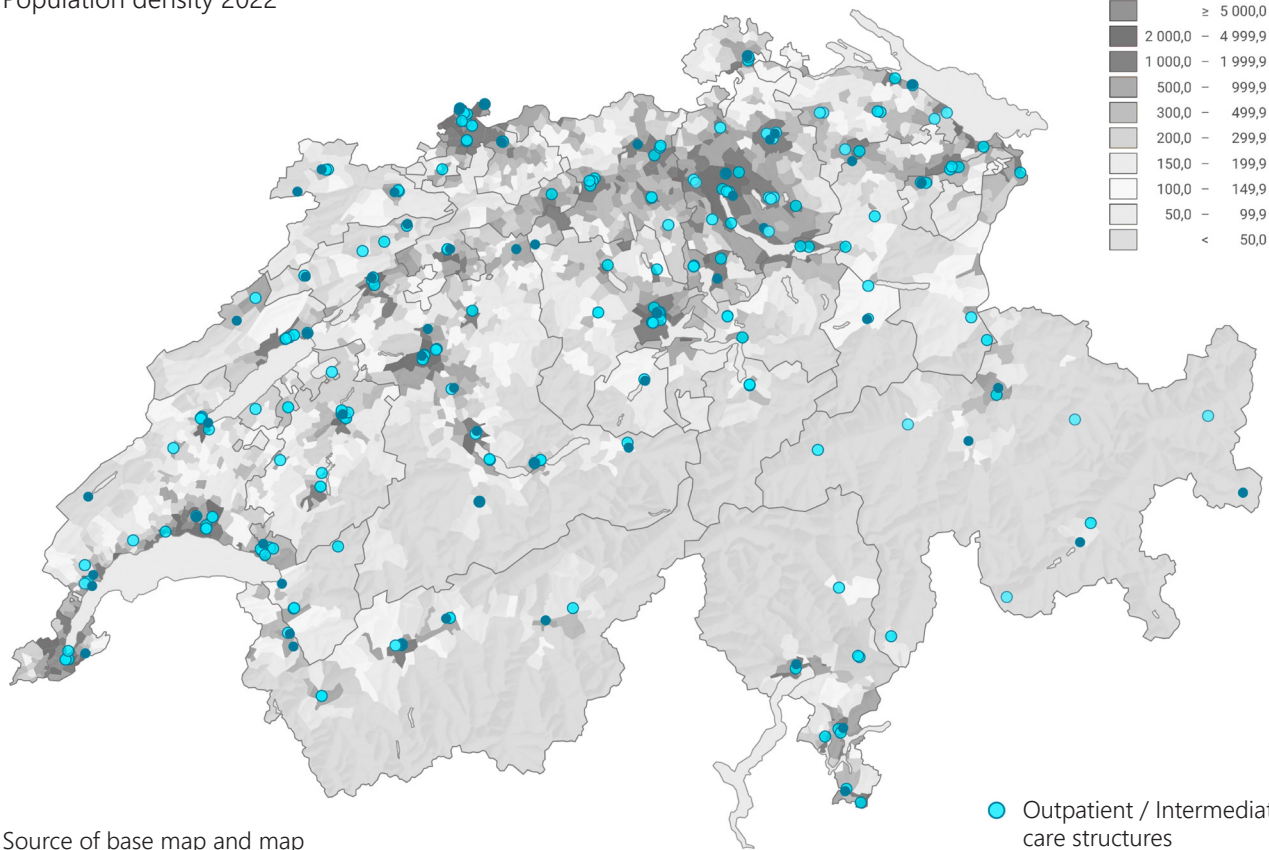


Switzerland - Psychiatric Structures for Adults

Population density 2022

Residents per km² of total surface

- ≥ 5 000,0
- 2 000,0 - 4 999,9
- 1 000,0 - 1 999,9
- 500,0 - 999,9
- 300,0 - 499,9
- 200,0 - 299,9
- 150,0 - 199,9
- 100,0 - 149,9
- 50,0 - 99,9
- < 50,0



Source of base map and map legend: Population Density in 2022. ©OFS 2023

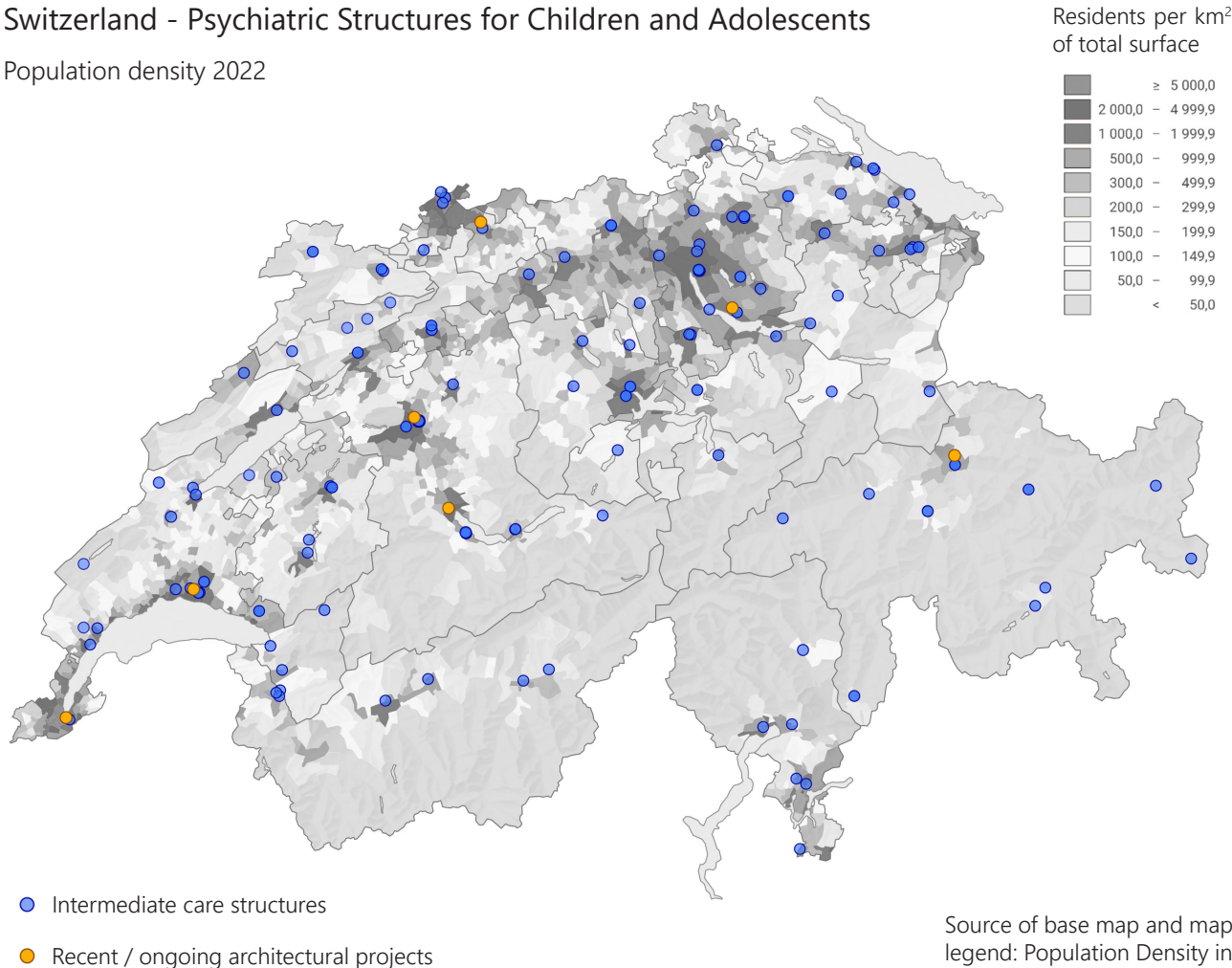
- Outpatient / Intermediate care structures
- Inpatient care structures

The Swiss Plateau, more populated than the other areas of the country, possesses the most mental healthcare facilities. In dense and larger agglomerations such as Zürich, Winterthur, Luzern, Basel, Bern, Geneva and Lausanne, there is significantly more mental healthcare available. In Fribourg, Bulle, Biel, Neuchâtel and Yverdon, there also seems to be a higher concentration of mental healthcare structures in comparison to Sion or Lugano for example. In fact, in more mountainous regions like Valais, Ticino and the Grisons, mental healthcare is concentrated in their respective hubs. Often, individuals living in more remote areas will commute to these hubs in order to receive treatment or therapy.

The following map shows the concentration of psychiatric intermediate care structures for children and adolescents in Switzerland.

Switzerland - Psychiatric Structures for Children and Adolescents

Population density 2022



Source of base map and map legend: Population Density in 2022. ©OFS 2023

⁹⁵ HUG. "La Maison de l'enfance et de l'adolescence réinvente l'hôpital". Accessed 29 December 2023. <https://mea.hug.ch/>.

⁹⁶ phalt Architekten. "Kinder und Jugendpsychiatrie Liestal BL". Accessed 29 December 2023. <https://phalt.ch/de/projekte/kinder-jugendpsychiatrie/>.

⁹⁷ PDGR. "Neubau Klinik für Kinder- und Jugendpsychiatrie". Accessed 29 December 2023. <https://www.pdgr.ch/neubau-klinik-fuer-kind-er-und-jugendpsychiatrie/>.

⁹⁸ MEDINSIDE. "UPD Bern wollen bis Ende 2028 Neubau beziehen". Accessed 29 December 2023. <https://www.medinside.ch/upd-wollen-neubau-bis-ende-2028-beziehen-20230306>.

⁹⁹ AETC. "Une Pièce de Nature au service des Enfants." Accessed October 22, 2023. <https://www.aetc.ch/fhel/>.

¹⁰⁰ Confédération Suisse, "Avenir de la Psychiatrie en Suisse: Rapport en réponse au postulat de Philipp Stähelin (10.3255)", 11 March 2016, 42.

The orange circles show recent or ongoing architectural projects of mental health facilities for children and adolescents specifically. As previously mentioned, intermediate care structures are often part of larger hospitals or clinics that offers other types of care.

There are less mental health structures specifically for children and adolescents in the country. The regions of Sion and Sierre, Biel and Lyss, Olten and Aarau as well as Bulle could benefit from more mental intermediate care structures for children and adolescents. One of Switzerland's goals in its health strategy is to offer more mental healthcare services for young people. We can observe that this strategy is indeed being carried out. There have been more recent or ongoing projects for children and adolescent mental health facilities in the country. Some recently built or ongoing projects include:

- Liestal: Child and Adolescent Psychiatric Clinic (PBL)⁹⁵
Built
- Geneva: Child and Adolescence House, MEA (HUG)⁹⁶
Built
- Chur: Child and Adolescent Psychiatric Hospital (PDGR)⁹⁷
Ongoing construction
- Bern: Child and Adolescent Psychiatric Hospital (UPD)⁹⁸
Ongoing planning
- Lausanne: Children's Psychiatric Hospital at Montétan⁹⁹
Ongoing planning

All in all, the Swiss cantonal plans play a primary role in responding to the needs in psychiatric care. A major necessity for the country is creating more outpatient and intermediate care structures. Some pilot projects of intermediate care have been carried out by a few cantons and show promising results. In addition, efforts are being made to improve the available database on these two types of structures within the country. This is all in view to better plan the direction psychiatric care should take with the help of a more accurate statistical base.¹⁰⁰

3

ARCHITECTURE

3. ARCHITECTURE

3.1 Healing architecture

Healing architecture is a term used to qualify an architecture that improves an individual's overall health, including psychological well-being. As a matter of fact, there is a significant link between the quality of our built environment and psychological well-being. In healthcare facilities, the intentions behind this type of built environment are not only to have a positive influence on a patient's recovery and self-healing, but also provide a safe comfortable environment for them and their loved ones. In addition, it is an architecture adapted to patients with chronic or acute conditions. Healing architecture is designed to improve the atmosphere in medical facilities through creating a therapeutic environment to reduce the stress, anxiety, and insecurity a patient or family could feel when being admitted or visiting. Some major goals of this type of architecture are to instill feelings of hope, calmness, reflection, and connection in fully functional health facilities.¹⁰¹

¹⁰¹ Jaja Thaddeus Akuneho, and Imaah Napoleon. "Healing Architecture in Hospital Designs". *Global Scientific Journals* 9, no. 6 (June 2021), 1-3.

¹⁰² The Center for Health Design (CHD). "About EBD: What is Evidence-Based Design (EBD)? " Accessed 2 November 2023. [https://www.healthdesign.org/certification-outreach/edac/about-ebd#:~:text=Evidence%20Based%20Design%20\(EBD\),achieve%20the%20best%20possible%20outcomes](https://www.healthdesign.org/certification-outreach/edac/about-ebd#:~:text=Evidence%20Based%20Design%20(EBD),achieve%20the%20best%20possible%20outcomes).

¹⁰³ Jain Malkin. *A Visual Reference for Evidence-Based Design*. 1st ed. Center for Health Design (CHD), 2008, 1-8.

¹⁰⁴ Architecture Research Foundation (ARQ). *Architecture as Medicine – The Importance of Architecture for Treatment Outcomes in Psychiatry*. Edited by From Lena and Stefan Lundin. Translated by Roger Tanner. Uppsala: ARQ – the Architecture Research Foundation, 2020, 29-31.

3.2 Evidence-based design

According to the Center for Health Design (CHD), evidence-based design (EBD) is "the process of basing decisions about the built environment on credible research to achieve the best possible outcomes."¹⁰² Evidence-based design (EBD) involves the architectural design of a healing care environment based on scientific research and evidence. It can also be seen in a broader view with research spanning from lean design, neurosciences to the design of healthcare systems that can improve a patient's condition or even the design of a patient's experience within a health facility.¹⁰³ Indeed, the research for a reduced-stress environment highlights the importance of certain factors which can be beneficial to a person's healing process.¹⁰⁴

Architecture plays a major part not only in optimizing the good functioning of a health facility with its staff, but also in providing a sense of comfort and safety to patients while helping them in their recovery. However, it is important to note that for a project to be considered a true healing environment through evidence-based design, the research must have a significant impact on the design. In addition, there is an ongoing progress of testing the hypothesis and collecting data about the outcomes wheth-

er they are successful or not. The multiplying of health facility projects using this type of approach help in feeding the general corpus of knowledge that can then be used by others in projects to come.¹⁰⁵

Listed below are some important components that should be considered when creating a healing environment that encompasses the different human senses:

- Presence of nature (real or virtual) through outdoor views, gardens, plants, and water elements
- Noise reduction
- Exposure to natural light and use of specific light frequencies in line with the human's chronobiological clock
- Effective ventilation for good air quality
- Clear wayfinding within the facility
- Balanced flow of patients and staff
- Patient's feeling of being in control by giving options (e.g. choice between private space and social space, quiet waiting area and busy waiting area, adjustable lighting intensity, type of music etc.)
- Adequate and comfortable spaces for patients with enough privacy including the provision of more single-bed rooms¹⁰⁶
- Integrated social support through spatial division or furniture (privacy for groups, seats for visitors in patient's room and possible accommodation)
- Working spaces for staff that are spacious enough to lower stress levels
- Playfulness and variation in the architecture
- Use of colors
- Positive distractions through art, interactive imagery, light installations, music, entertainment, or humor¹⁰⁷

This multisensory approach thus includes optical, acoustic, olfactory, and tactile variables that become design parameters. The concept of atmosphere is also another form of multisensory design, as it illustrates how components like light, sound, smell, and color can influence a person's experience of a particular environment.¹⁰⁸

¹⁰⁵ Jain Malkin. *A Visual Reference for Evidence-Based Design*. 1st ed. Center for Health Design (CHD), 2008, 9.

¹⁰⁶ Jaja Thaddeus Akuneho, and Imaah Napoleon. "Healing Architecture in Hospital Designs". *Global Scientific Journals* 9, no. 6 (June 2021), 2-4.

¹⁰⁷ Reuben M. Rainey, *Design for Healing*. Vol. 15. 1 vols. *SiteLINES: A Journal of Place*. Foundation for Landscape Studies, 2019, 4-5.

¹⁰⁸ Ute Ziegler. "Multi-Sensory Design as a Health Resource: Customizable, Individualized, and Stress-regulating Spaces". *Design Issues* 31, no. 1 (Winter 2015). https://doi.org/10.1162/DESI_a_00309.

3.3 Biophilic design

¹⁰⁹ Stephen R. Kellert and Elizabeth F. Calabrese. *The Practice of Biophilic Design*, 2015, 3.

Biophilia can be defined as “the inherent human inclination to affiliate with nature that even in the modern world continues to be critical to people’s physical and mental health and well-being”.¹⁰⁹ Indeed, we have evolved as a species in a bio-centric world and continue to possess this biological connection with nature. However, this biological tendency needs to be supported through specific environments or well-intended design to become effective. Modern society has had the tendency to disconnect itself more from the natural world, seeing it solely as a resource to be exploited or a pleasant asset to have. This can be seen in urban development and architecture for example. Our natural world has increasingly shifted from the outdoors to the indoor built environment where many of us spent most of our time every day. With this evolution, a crucial challenge presents itself: how can we design to preserve this beneficial contact and innate inclination that we have with nature?

¹¹⁰ Ibid., 3-8.

¹¹¹ William Browning, Catherine Ryan and Joseph Clancy. *14 Patterns of Biophilic Design*. New York: Terrapin Bright Green, 2014, 24-37.

Scientific studies have highlighted the positive impact of biophilic design on an individual’s physical and mental health, performance, and well-being. In the healthcare environment these benefits include improving illness recovery, accelerating the healing process, regulating hormonal balance, boosting a patient or staff’s mood and lowering levels of stress, anxiety, anger, fatigue, aggressivity and confusion that can arise.¹¹⁰ Biophilic design principles are being more consciously used in healthcare building architecture, as they can contribute to creating spaces of quality with the direct or indirect integration of nature, influencing the relationship between patients, staff, visitors, and the built environment.¹¹¹



Lindesberg Health Center,
Sweden, 2019.
©Åke E:son Lindman & White



Hospital gardens open to the public and green roof at the Khoo Teck Puat Hospital in Yishun Central, Singapore, 2012. ©WorldArchitectureNews.com



Central garden courtyard with water features at the Khoo Teck Puat Hospital in Yishun Central, Singapore, 2015. ©RMJM



Maggie's Leeds Centre at St James's University Hospital, Harehills, United Kingdom, 2020. ©Hufton + Crow



Kronstad Psychiatric Hospital, Bergen, Norway, 2013. ©Pål Hoff



Östra Psychiatric Hospital, Göteborg, Sweden, 2006. ©Hans Wretling

¹¹² William Browning, Catherine Ryan, and Joseph Clancy. *14 Patterns of Biophilic Design*. New York: Terrapin Bright Green, 2014, 1-5.

The implementation of biophilic design has become more frequent in recent years with efforts being made to integrate them into architectural projects. According to the book “14 Patterns of Biophilic Design”, biophilic design can be divided into three categories: nature in the space, nature analogues and nature of the space.¹¹² We will review below the three categories with their related biophilic design patterns.

3.3.1 “Nature in the space”: Direct experience of nature

The first category of biophilic design involves the direct physical presence of nature in space. These elements of nature include light, air, fire as well as natural ecosystems, vegetation, animals, courtyard gardens, green walls, or roofs. Water elements like ponds, constructed wetlands, fountains, or aquariums are also often used to create positive and soothing experiences. Our perception and response to weather is also an interesting element to mention, as it has been historically important to our survival as a human species. Contact with weather through views, direct exposure, or simulations of weather situations through environmental conditions control can all be stimulating experiences.¹¹³

¹¹³ Stephen R. Kellert and Elizabeth F. Calabrese. *The Practice of Biophilic Design*, 2015, 11-14.

To intensify the experience and interaction, it is recommended to incorporate the different human senses and promote movement. We can distinguish seven biophilic design patterns for the direct experience of nature:

- Visual link with nature and its processes
- Non-visual link with nature and its processes: auditory, olfactory, haptic and gustatory stimuli
- Non-rhythmic sensory stimuli: fleeting moments of connection with nature that cannot be accurately predicted but can still be the subject of a statistical analysis
- Subtle airflow, thermal fluctuations, barometric pressure, and relative humidity similar to natural environments
- Presence of calm water: intensifies the experience of place through visual, auditory and haptic stimuli
- Diffuse and varying light: changes in light intensities that simulate natural scenes
- Link with natural ecosystems: incorporation of nature’s seasonal or temporal fluctuations¹¹⁴

¹¹⁴ Ibid., 11-14.

3.3.2 “Nature analogues”: Indirect experience of nature

The second category of biophilic design comprises references or evocations of nature, such as: patterns, materials, textures, forms, colors, and objects that replicate those found in natural environments. This category also includes the use of natural materials that have been transformed or processed, making them an indirect connection to nature. There are three patterns for the indirect experience of nature:

- Organic forms and biomimicry, patterns, geometries, and ratios
- Connection with nature through materials that have been processed or transformed and can refer to the local natural resources
- Organized complexity and hierarchy that can be found in nature¹¹⁵

¹¹⁵ Ibid., 15-18.

3.3.3 “Nature of the space”: Spatial configurations in nature

The third category of biophilic design involves organizing spaces in a way that can engage us in the quest to discover spaces or views that may seem mysterious, unknown, or slightly dangerous. These spaces could also feel safe or provide a completely unobstructed view for surveillance. There are four biophilic design patterns for these specific spatial configurations:

- Prospect: large views of the environment that allow an individual to evaluate threats and opportunities
- Refuge: safe and secure spaces
- Risk or Peril: a spatial configuration that seems threatening but is coupled with elements that induce feelings of protection and safety
- Mystery: configuration or view that lures an individual to walk deeper into the space to discover the missing information¹¹⁶

¹¹⁶ William Browning, Catherine Ryan, and Joseph Clancy. *14 Patterns of Biophilic Design*. New York: Terrapin Bright Green, 2014, 9-11.

Many scientific studies have proven that evidence-based biophilic design applied to healthcare settings can have beneficial effects on patients, visitors, and staff by improving health outcomes. It can help alleviate pain, promote healing, lower stress levels, and improve emotional well-being. There are different levels of encountering nature in this type of environment. For instance, as previously mentioned, horticultural therapy is a physically active and effective interaction between a patient and nature,

¹¹⁷ Roger S. Ulrich, "Biophilic Theory and Research for Healthcare Design". In *Biophilic Design: The Theory, Science, and Practice of Bringing Buildings to Life*, by Stephen R. Kellert, Judith H. Heerwagen, and Martin L. Mador, 87–97. Hoboken, NJ: John Wiley, 2008.

¹¹⁸ Roger S. Ulrich, "Biophilic Theory and Research for Healthcare Design". In *Biophilic Design: The Theory, Science, and Practice of Bringing Buildings to Life*, by Stephen R. Kellert, Judith H. Heerwagen, and Martin L. Mador, 87–106. Hoboken, NJ: John Wiley, 2008.

while other more passive contacts include taking a stroll or sitting in a garden, or even contemplating a natural landscape through a window. There is much evidence from studies suggesting the healing and restorative properties of gardens for especially stressed patients. Gardens can also offer fresh air, daylight, more privacy, social support, possibilities of "escape" from the medical environment or promotion of physical activity in the outdoors, which can all be beneficial to a patient's well-being.¹¹⁷

Mental health facilities are not exempt from the stress response in patients, visitors, or staff that can be found in other healthcare facilities. Stress is one of the keys to understanding how healthcare environments, evidence-based design and biophilic design can influence outcomes. The restoration theory linked to the evolution of humankind is important for understanding why views of nature and content can have stress-reducing and beneficial health influences. As humans, we do not have this disposition for many built environments and materials. By incorporating many properties that can be found in natural settings in mental health facilities, it is possible to influence and awaken therapeutic responses that have remained with us throughout our evolution as a species. These can all result in a built environment that is restorative to a patient.¹¹⁸

3.4 Urbanization and mental health

Scientific researchers, architects, designers, and health professionals have been more implicated in showing the positive outcomes of biophilic design on health these past years. They have also been promoting the importance of the connection between humans and nature be it on the scale of a city, a building or specific space. In a global perspective, along with the demographic fluctuations and effects on urbanization, the question of designing to improve the population's well-being and influence the process of healing in densifying territories is crucial. As a matter of fact, according to the WHO, over 55% of the world's population is currently living in urban areas. This percentage is expected to rise to nearly 70% by 2050.¹¹⁹ With the current trend of urban growth and densification of cities, part of the challenge will be to plan and design in a manner that will protect and promote physical, mental health and overall well-being.

It is no surprise that most cities are hosts to multiple stress-inducing factors, which include high population density, traffic, crowded public

¹¹⁹ World Health Organization (WHO). "Urban Health". Accessed 5 November 2023. https://www.who.int/health-topics/urban-health#tab=tab_1.

transport, poverty, unsafety, pollution, urban heat islands and noise. Urban areas are hotspots for stressors which can affect a person's mental health negatively. It has been observed that some mental illnesses like anxiety, depression, psychosis, and addiction disorders are more prevalent in urban areas compared to rural areas. Yet, these urban areas are also attractive places that generally offer better access to healthcare, employment, and education. To the extent of the possible, a better balance between mental health and city living should be sought.¹²⁰ It is in this particular context that healing architecture, evidence-based design and biophilic design can become beneficial and powerful tools, especially in influencing health and well-being, not necessarily only on the scale of a building, but also on an urban scale.

The research project "Urban remediation in early psychosis: a living lab to emplace recovery in the city" is currently being pursued by the institute of geography in Neuchâtel since March 2023. The project started after a joint research collaboration with the CHUV department of psychiatry on the relationship between urban settings and psychosis. The current project's goal is to develop a city, Lausanne as base city, that is more beneficial to mental health. The project will specifically tackle the question of how a city can help promote the healing of patients with psychosis. The first phase will consist of analyzing the current state of a neighborhood in Lausanne and plan interventions based on research and exchanges with implicated individuals. The second more ambitious phase will consist of planning a mental health intervention at the scale of the city of Lausanne.¹²¹

All in all, this ongoing research project also shows that the question of mental health in densifying urban territories along with demographic changes is currently very relevant. It is a challenge that we must already address today, given the actual trends, so that we can improve the well-being of citizens in the years to come.

"However, for me, there was never any doubt that architecture must contribute to society's progress and, ultimately, to our individual and collective well-being."¹²²

Zaha Hadid

¹²⁰ Oliver Gruebner, Michael A. Rapp, Mazda Adli, Ulrike Kluge, Sandro Galea, and Andreas Heinz. "Cities and Mental Health". *Deutsches Ärzteblatt International* 114 (2017): 121–127.

¹²¹ Université de Neuchâtel (UNINE). "Urban Remediation in Early Psychosis: A Living Lab to Emplace Recovery in the City". Accessed 5 November 2023. <https://www.unine.ch/geographie/es/home/recherche/geographies-urbaines/urban-remediation-in-early-psy-1.html>.

¹²² Zaha Hadid. "The Way Forward: In the Words of Zaha Hadid". RIBA Gold Medal Acceptance Speech, London, 3 February 2016. Accessed 3 January 2024. <https://www.architectural-review.com/es-says/the-way-forward-in-the-words-of-zaha-hadid>.

4

CASE STUDIES

4. CASE STUDIES

To respond to the current needs in creating mental health care facilities for young people, the following five case studies will be analyzed. They have all been built in the last four years specifically for children, adolescents, or young adults. In addition, they incorporate different psychiatric interventions from the spectrum be it promotion, prevention, treatment, or treatment continuum.

○ 4.1 Childhood and Adolescence House (MEA)

GENEVA (HUG), SWITZERLAND - 2023
CLR architectes

○ 4.2 De Korbeel and De Patio Child and Youth Psychiatric Hospital

KORTRIJK, BELGIUM - 2022
VK architects+engineers

○ 4.3 Children's Day Hospital

CHEVILLY-LARUE, FRANCE - 2020
Tolila+Gilliland

○ 4.4 Children Health and Support Center

KITAKAMI, JAPAN - 2021
Unemori teco Associates / UtA

○ 4.5 Tzu Chi Humanistic Youth Center

YISHUN CENTRAL, SINGAPORE - 2022
Kyooob Architects, Grey Canopy

We will discuss the strongpoints of each architectural project by looking at the following points:

1. Therapeutic approach
2. Mixed-use program and/or community access
3. Healing architecture, biophilia

Through examining each building in an urban setting, we will discuss the strengths and characteristics of each case study. We will then identify ten strategies that have been used in the different architectural projects. These will be key to determine which qualities the architecture of an urban mental health center in the 21st century should possess.

Listed below are some other important questions we should keep in mind while considering each case study.

- How does the architectural project take part in breaking the stigma of mental illness?
- How is the action of entering these mental health related facilities and crossing the threshold facilitated?
- How are spaces navigated?
- How have spaces been designed to promote healing, offer comfort and possibilities for social interaction or privacy?

4.1 Childhood and Adolescence House (MEA)

GENEVA (HUG), SWITZERLAND - 2023 - CLR architectes



Site plan of the MEA.

The Childhood and Adolescence House is part of the University Hospital of Geneva (HUG) and was opened in summer 2023. It is the first building constructed in the redevelopment plan of the HUG Children's Hospital site. It is located between the HUG Maternity facility and the Children's Hospital. The Genevois architecture office CLR architectes won the mental health center competition from 2016 along with the landscape architect Pascal Heyraud. The project began in November 2018 with the destruction of the former dental clinic present on site. The building has also been constructed directly next to the La Roseaie primary school.¹²³

¹²³ HUG. "MEA - Le Bâtiment". Accessed 2 October 2023. <https://mea.hug.ch/le-batiment/>.

The MEA regroups now all 11 psychiatric units, day hospitals and consultation centers for children, adolescents and young adults under one roof. Mental healthcare is offered for individuals up to 25 years old through three different types of care: inpatient, intermediate and outpatient. The decision to group these different centers was to favor synergies between professionals and give the public a less confusing idea of the available resources for young people in the city. These different units were in fact previously dispersed all throughout the city of Geneva.

The project revolves around the following axes:

- Child and adolescent psychiatry
- Adolescent and young adult medicine
- Management of overweight and obesity in children and adolescents
- Education and research¹²⁴

¹²⁴ HUG. "La Maison de l'Enfance et de l'Adolescence ré-invente l'hôpital", 2 October 2023. <https://mea.hug.ch/>.



The MEA with its main entrance. Photograph taken from the Boulevard de la Cluse, Geneva, 2023. ©Kathelijne Reijse

An original and innovative concept this building showcases is that of a medical and treatment space combined with other functionalities open to the community. These include spaces for culture, education and science. The mental health units and centers, multifunctional program and different organized activities this building hosts can thus cover the entirety of the psychiatric intervention spectrum ranging from promotion to continuum of treatment.

The mixed-use program of the building enables individuals from a young age, be it with their families, friends or with school to get used to entering the mental health center, as it is also a place they can associate with education and fun. Through a discussion I had with CLR architectes, it became evident that a major goal of this project was to normalize entering the mental health facility from a young age with, for instance, organized school visits or joint activities. This would enable children or adolescents seeking help and support later not to be afraid of entering the building. Through demystifying mental health illness and creating spaces that are not only linked to treatment but also education and leisure, the stigma of mental illness can be fought and taking the first step towards seeking help can be facilitated.¹²⁵ The plan below shows the strategic position of the MEA close to two Geneva schools. The first is La Roseraie primary school and the second is De L'aubépine middle school. Through this proximity, there can be a better interconnectivity between the MEA and children or adolescents at school from a young age on.

¹²⁵ Appendix 3, Interview with Patrick Longchamp (CLR architectes), 125.



While the MEA is a place where one can receive treatment for mental health conditions, it is also a place where one can visit a science exhibition, join mental and physical health campaigns, play sports, participate in theater or watch a movie at the CinéMEA. These carefully thought-out functions commonly found in community centers are now present within the medical facility. They can help in reducing the fear and anxiety of entering the medical space for young people seeking treatment. The fear of stepping into the building to seek help for mental health conditions will probably be reduced for people that are already familiar with some spaces through having previously participated in recreational or educational activities there. Aside from the location of the building, its multifunctionality, layout and design, especially of its ground floor play an important part in welcoming individuals seeking mental health care.

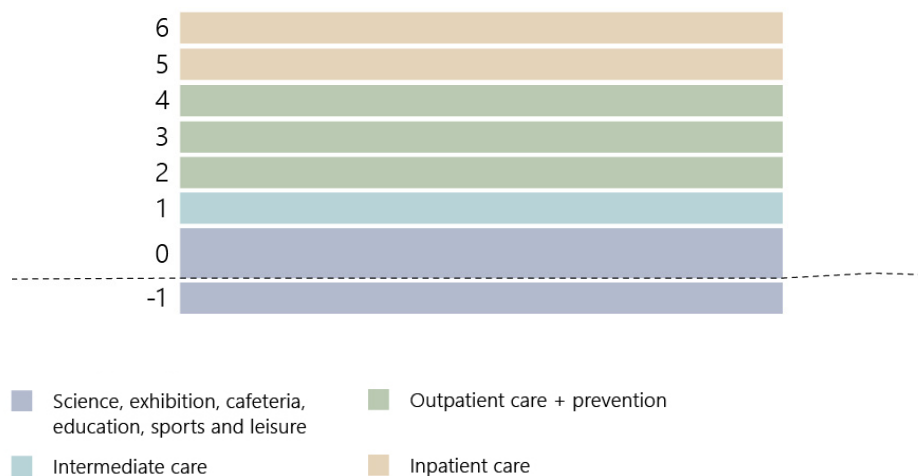
The building is composed of eight levels in total. Six levels are dedicated to mental healthcare with spaces for intermediate care (day clinics), outpatient care and inpatient care. The first floor hosts day clinics for young children, while the floors ranging from two to four possess outpatient units including a crisis unit, consultation-liaison unit, nutrition unit and suicide prevention sector. The two top floors are inpatient units where children or adolescents can be hospitalized for different periods of time. The fifth floor hosts an inpatient unit for children staying for a short time. A short stay consists of a hospitalization for up to five days. The sixth floor hosts an inpatient unit for adolescents staying for a longer time. These medium to long hospitalizations last on average around two to three weeks. If we look at a patient's time spent in the building, it makes indeed more sense to place the psychiatric inpatient units with more serious cases and the longest stays at the top of the building where there will be less noise, necessary vertical displacement and overall daily traffic like in the floors below. The two lower levels (underground and ground floor) are open to the public during the day. These two floors contribute to creating a certain permeability within the facility. The MEA, open to the city of Geneva, will host cinema festivals, plan sportive activities and outdoor activities at the vegetable garden for instance. Moreover, some theater shows have already taken place in the evenings at the multifunctional hall for the public.¹²⁶ Thus, the opening hours of the MEA for more communal activities are not strictly set for the day and can be adapted to organized events at night as seen with the example of the nocturnal theater performances.

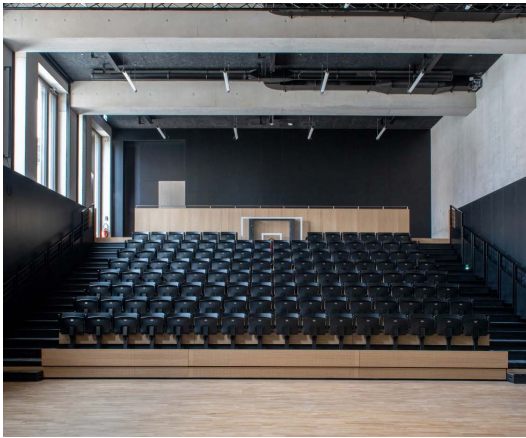
¹²⁶ Appendix 3, Interview with Patrick Longchamp (CLR architectes), 125.

- 6 MALATAVIE inpatient unit for adolescents with medium to long hospitalizations
- 5 Inpatient unit for children with short to medium hospitalizations
- 4 MALATAVIE crisis unit with outpatient care and suicide prevention
Therapeutic mediation spaces for art-therapy, kitchen workshops, ergo-therapy, radio station
- 3 Consultation-liaison unit
Food and nutrition unit for children and adolescents
Outpatient consultation for health in adolescents and young adults
Consultation for health and exercise
- 2 Early childhood guidance unit (0 to 4 years old)
Transcultural consultations in children and adolescent psychiatry
- 1 Day clinics for young children (0 to 1 year old and 1 to 2 years old)
Therapeutic kindergarten (18 months to 5 years old)
- 0 Reception with waiting area, café, classrooms, music and dance studio, UNIGE Bioscope, exhibitions spaces and bike storage room
- 1 Control room, changing rooms, video recording room, projection room (CinéMEA) and multifunctional hall

Diagram of program by levels - MEA

Mixed-use building with different types of care

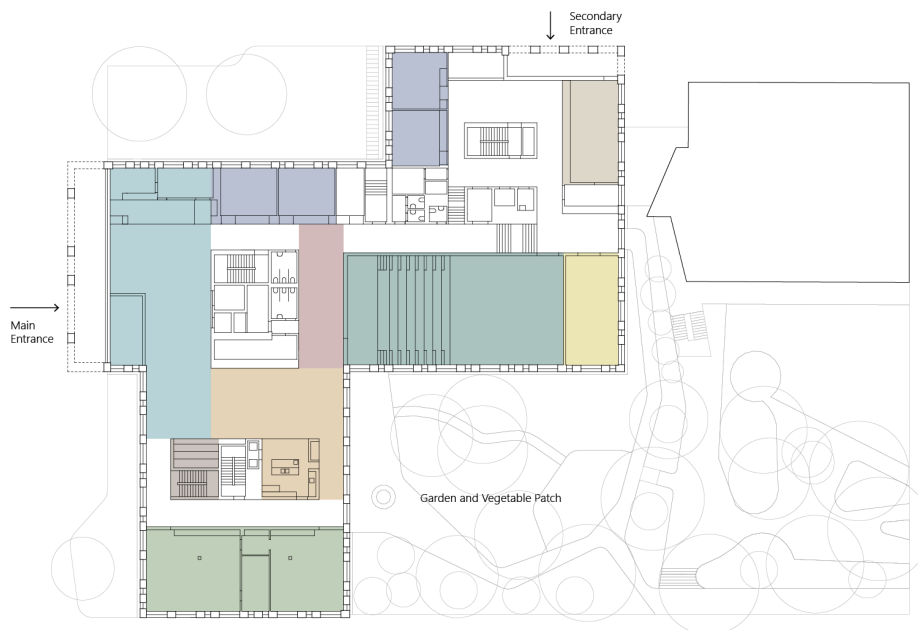




Left: Multifunctional hall in its seating configuration.
©CLR architectes

Right: Theater play at the multifunctional hall.
©CLR architectes

The spaces open to the community during the day and sometimes at night can be seen on the ground floor plan below. These spaces are dedicated to education, culture, leisure, sports, music and food. The multifunctional hall (on the photos above) is a flexible space. It can serve as a sports hall or can be configured to host an event like a theater play where mobile bleachers are stretched out.



- | | |
|------------------------------|-------------------------------------|
| Reception area | Exhibition area |
| Projection room entrance | Cafeteria |
| Bioscope - science workshops | Multi-purpose hall (sport / events) |
| Classroom | Music and dance room |
| | Bike storage room |

0 2 5 10



Level 0 - MEA
Mixed-used program open
to the city of Geneva.

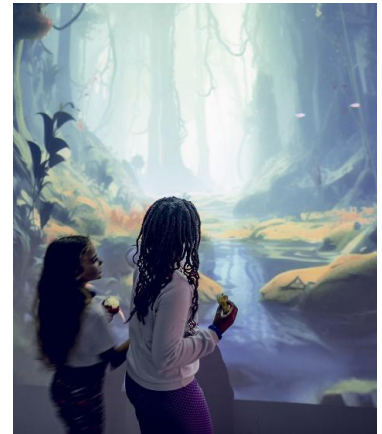
Adapted from ground floor
plan by ©CLR architectes

Left: MEA entrance area with reception desk, designed with same relief as the vertical façade elements. ©Anja Ils



Right: A creature of the *Symbiotopia* in the ground floor's terrazzo, a touch of playfulness in the architecture. ©Anja Ils

Left: Entrance space of the Café La Maison with greenery, reused hospital furniture and colorful chairs made out of recycled fish nets. ©Anja Ils



Right: Children walking past digital art projections of the *Symbiotopia* universe. ©David Wagnières

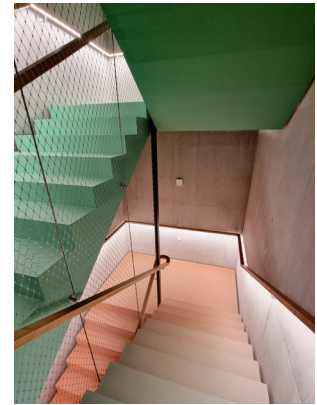
Left: ANIMATOU projection at the CinéMEA on the opening day. ©David Wagnières



Right: Entrance door of the UNIGE bioscope. ©Anja Ils



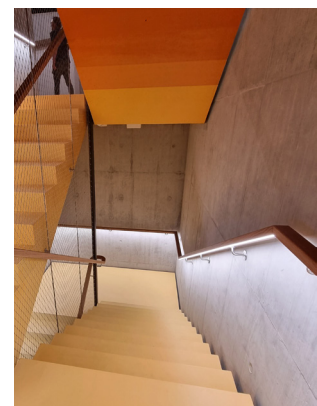
The ground floor of the MEA is a place where there is a fusion between the hospital world and citizens. It is the threshold between the city and the medical realm. It can also be characterized by its playfulness, one of the essential qualities in healing architecture, especially for young individuals. Playfulness and positive distractions are very present from the moment one steps into the facility. The colorful furniture and lamps visible on the previous photographs, also contribute to creating a cheerful atmosphere and spaces that feel more welcoming. The use of materials such as wood and the presence of plants provide warmth and create a therapeutic atmosphere in this psychiatric facility. In addition, the ground floor inhabits an imaginary world with fantastical creatures from the *Symbiotopia*. Aside from the magical creatures present in the building's ground floor, riddles, digital art and a narration were proposed through artificial intelligence tools. This imaginary universe within the medical facility adds a dash of playfulness and mysteries for children to discover.¹²⁷ A bright palette of colors is also quite present in the building. While the staircase core structures of the building appear in raw concrete with strips of lights highlighting the perimeter of their exterior shell, the inside inhabits a staircase painted in a vertical gradient of colors. This makes the action of walking up and down the rainbow stairs a pleasant and very colorful experience.



Walking down the colorful staircase: turquoise to pink gradient. ©Anja Ils

¹²⁷ ITU - AI for good. "Dorier Maison de l'enfant et de l'adolescent HUG 2023", 5 November 2023. <https://aiforgood.itu.int/dorier-maison-de-lenfant-et-de-ladolecent-hug-2023/>.

In terms of materiality, the ground floor is the only level covered in terrazzo with metallic embedded fantastical creatures. There are however still some smaller areas of the ground floor like the café or the waiting area that are covered in wooden parquet. The surfaces of the bathrooms and kitchen have been covered in tiles. The difference in flooring material between the ground floor and upper levels enables people to know when they have reached the ground floor in order to leave the building for example. The upper floors are all composed of wooden parquet, which is not so common to see in larger medical facilities. This definitely creates a friendlier and warmer medical space. The structural cores with the elevators and staircases appear in raw concrete from the outside, which makes them stand out as distributive elements, also making it easier to find one's way throughout the facility. Whilst navigating inside the building, one does not have the feeling of walking in endlessly long hallways given the generosity of their width and the outdoor views that punctuate the end of the longer ones. One of CLR architectes' intentions was to create this play of different views on each floor, giving more variety to the levels and different perspectives of the outdoors.



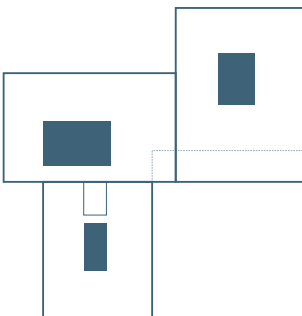
Walking down the colorful staircase: orange to yellow gradient. ©Anja Ils



Colorful waiting area on the ground floor by the main reception desk. ©Anja IIs

They are translated on the façade, giving it a more dynamic aspect. These spaces at the end or beginning of each hallway give the users the possibility to contemplate the neighboring environment. They also allow a generous amount of natural light to seep through the larger windows and make the building's corridors more inviting. Moreover, the dialog between wooden elements such as the floor, doors, window frames and the raw concrete create a rich experience of space. In terms of navigation inside the building, vertical distribution is ensured through two main distributive cores with lifts and staircases, and a third smaller staircase. Each level has a similar distribution system that is dictated by the structural cores' positions. These have a rather central location to the three rectangles, which merged, constitute the global shape of the building. This clear distribution system ensures that users of the building can easily find their way within the facility. The navigation of patients, visitors and staff in the building is very important, as it also contributes to their overall wellbeing and experience. It can only be beneficial for an individual if the possibilities of feeling additional stress or panic due to being lost is reduced.

¹²⁸ Appendix 3, Interview with Patrick Longchamp (CLR architectes), 125.



Vertical circulation system in the MEA. The hatches indicate the structural cores with stairs or lifts.

Patient rooms, offices, group rooms and most other functions have spaces that are positioned by the façade with at least one face of the room with a large window. This ensures that every room possesses a good quality of natural light for any type of user. Windows were a subject of major reflections in the project. Every room possesses its complimentary shading or sun protection device. Users can bring the shades down according to their preferences. Lighting in the building is also automatically regulated and adapted to the human circadian rhythm. Since most of the facility is destined for young patients with mental health conditions and who can sometimes have suicidal thoughts, it is necessary to take precautions with the design of windows. In the case of the MEA, windows of rooms can only be opened until a certain angle before it blocks. This ensures that the patient or user can get an adequate amount of fresh air into the room while being safe at a higher elevation in the building.¹²⁸ Furthermore, the loggia on the fourth floor has been designed with a discreet protective grid that acts as a security layer and a base for creeping plants to grow. It is an element of vegetation in the façade, which from the inside, doesn't give someone the feeling of being imprisoned.

The window is an architectural element which contributes to the playfulness of the MEA. By looking closely at the façade, one notices different tinted glass used for the windows. These possess different reflective properties. This gives the façade fun variations combined with pillar elements that vary position on each level. The mineral pillar cladding of the MEA has similar color tones (beige) to the adjacent school and the other neighboring buildings. These vertical façade elements have a relief with vertical lines. This motif with linear grooves can also be found inside the building through the design of the reception desk and the café La Maison counter.¹²⁹ There certainly is a playful dialog between exterior and interior elements.

¹²⁹ Appendix 3, Interview with Patrick Longchamp (CLR architectes), 125.



Left: MEA façade with mineral elements that have similar color tones to the neighboring buildings, 2023.
©Kathelijne Reijse



Right: MEA façade with different tinted glass and the primary school La Roseaie in the background, 2023.
©Kathelijne Reijse

Given the initial constraints of the building, which is positioned in a rather dense area of the city, bound to the HUG site with close neighboring buildings, a challenge was to propose spaces that are comfortable for individuals with mental health conditions that may feel overwhelmed by this proximity. Since there were planned conditions and surfaces this building should possess for the competition, a challenge was to think of ways to reduce feelings of being too exposed or close to the surrounding buildings. A solution that was proposed was to increase the depth of the facility's perimeter. Through these thick walls, the building offers more depth to its users. This generous skin can be used for niches, safe and secure spaces that individuals can inhabit or use for different functions.

While exploring the building, it becomes quite evident that the question of depth and creating different types of alcoves were an important part of the project. They take part in creating safe and secure bubbles within the MEA with possibilities for users of the building to contemplate the

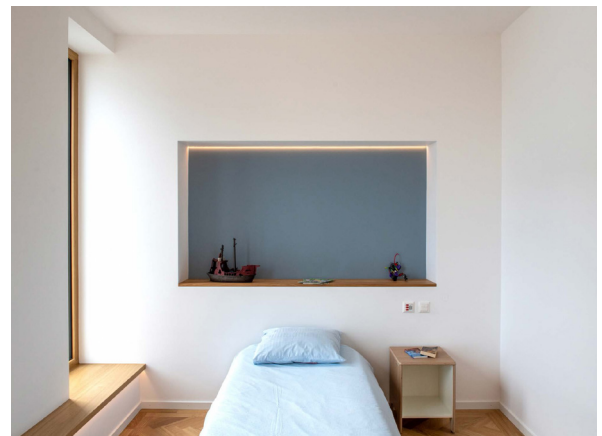
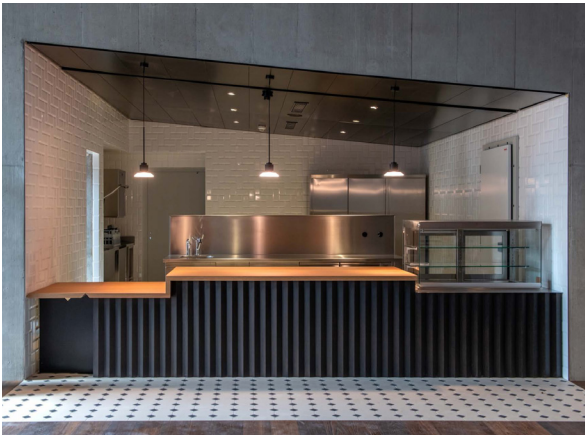
Top Left: Café La Maison alcove on the ground floor of the MEA. ©CLR architectes

Top right: Wooden bleachers in an alcove by the café. ©Anja Ils

Bottom left: Loggia on the fourth floor with a wooden deck and a discreet protective grid with creeping plants. ©CLR architectes

Bottom right: Single inpatient bedroom with alcoves (window and shelf). ©CLR architectes

environment alone or interact with other people. On the ground floor, alcoves can inhabit functional spaces or create possibilities of socializing and playing in a protective shell. These niches are for instance present at the café la Maison or the pine wooden bleachers nearby with the blackboard to doodle on. On the upper floors, be it the hallway, a patient room or office, the wall can be inhabited. It can be used as a bench to change shoes or to look out the window for instance, providing moments of reflection and contemplation. The main staircases also possess alcoves that can be used as benches on each level. The loggia can be considered an alcove as well, another way to work with the depth of the building. In the different units, niches in the depth of the façade are used to place toys, books, and other objects onto. Through creating alcoves, people have the possibility to use them for retreat or to be surrounded by others. They offer a safe and secure space within the MEA. In addition, there is freedom in the way users of the building can occupy them.





The way users can occupy space in their own fashion is especially observable on the first floor of the MEA where there are day clinics and a therapeutic kindergarten. Psychiatric intermediate care for very young children is offered there. Young patients aged between 0 and 2, and their parents spend a few hours or the entire day at the day hospital, however frequently as necessary. While visiting this floor, the atmosphere felt very cozy and welcoming, not only through the architecture and materiality, but also through the way personal traces of users made themselves known. It is visible on the following photographs how users of the unit have made it their own space and added their personal touch. This is also possible because of how intermediate psychiatric care functions in comparison to outpatient care where the time spent in the building is shorter. The day clinics are separated by doors in the hallways like the different psychiatric outpatient units on the upper floors, however the door handles have been placed higher. These ensure that young children do not wander off to another part of the building without supervision.

Left: End of hallway with framed view on neighboring building. ©Anja Ils

Right: Alcove used as a bench in colorful staircase. ©Anja Ils

Left: Welcome sign at the entrance of the day clinic, in front of a structural core. ©Anja Ils

Right: Living room space at the day clinic. ©Anja Ils





Day clinic hallway with furniture, plants, drawings and a piano. ©Anja Ils

Level 1 - MEA
First floor plan with day clinics for young children.

Adapted from floor plan by
©CLR architectes

Shared terrace and outdoor
playspace of the day clinics.
©Anja Ils



On the first floor, one can find the nurse's office, bedrooms, rooms, nap spaces and spaces for therapy. The latter includes rooms for psychomotor therapy and the kitchen, which can also be used for cooking workshops. Spaces where children or parents can interact and socialize with others include the dining room, playroom, living room and terrace. The outdoor space under the pergola is shared between the day clinics. As for the loggia on the fourth level, security measures have been taken. In this case, the terrace railing with creeping plants has been raised so that young children cannot climb over. The plan below shows the first floor with its different functions. The colors on the following plans indicate whether it is a private or social space, staff space, or outdoor space.



0 2 5 10

Level 1 - Day clinics for young children

- Private space
- Social space
- Staff space
- Outdoor play space





Left: Level 3 - MEA
Third floor schematic plan of program.

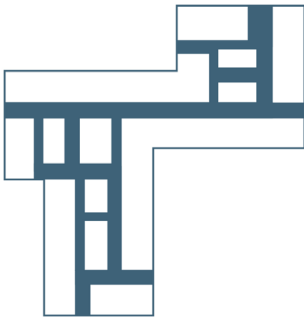
Right: Level 4 - MEA
Fourth floor schematic plan of program.

Level 3 - Consultation-liaison unit
Food and nutrition unit for children and adolescents
Outpatient consultation for health in adolescents and young adults
Consultation for health and exercise

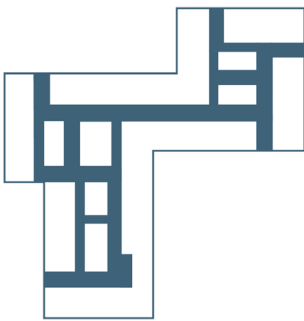


- Private space
- Social space
- Staff space
- Outdoor space

Level 4 - MALATAVIE crisis unit with outpatient care and suicide prevention
Therapeutic mediation spaces



Level 3 - MEA
Circulation spaces.



Level 4 - MEA
Circulation spaces.

¹³⁰ HUG. "Santé des Ados." Accessed 2 November 2023. <https://www.hug.ch/enfants-ados/specialites-medicales-chirurgicales/sante-ados>.

¹³¹ HUG. "MALATAVIE: Unité de Crise pour Ados". Accessed 2 November 2023. <https://www.hug.ch/enfants-ados/pedopsychiatrie/malatavie-unite-crise-pour-ados>.

Left: Kitchen space for cooking workshops on level 4.
©CLR architectes

Right: The wooden parquet has been arranged in a herringbone pattern.
©CLR architectes

The third floor of the MEA is a level with different types of outpatient units. The units have been separated so that there are two main reception desks and two waiting rooms. One is positioned near the main structural core A, while the other has been positioned near the second structural core B. Most of the floor consists of consultation rooms or offices given the outpatient program. However, they are not all purely psychiatric units. For example, the outpatient unit for health in adolescents and young adults proposes consultations in mental healthcare as well as somatic, nutritional, sexual and reproductive health. This holistic approach to the health of young people goes in line with the WHO initiatives to create more youth-friendly services to take care of the whole person. Young migrants who have been affected by their journeys are also welcome to use these services and can use interpreters if translations are necessary.¹³⁰

The fourth level of the MEA consists of the outpatient MALATAVIE crisis unit for adolescents and young adults as well as therapeutic mediation spaces. The spaces around the structural core A are for the MALATAVIE unit. Part of the unit is dedicated to suicide prevention, so aside from specialized consultations, information sessions and discussions can be organized with a patient's entourage or with professionals on the topic of suicide and its prevention.¹³¹ The rest of the floor consists of consultation rooms, offices, a living room, a radio studio, a book reading corner with "the dragon" and spaces for therapeutic mediation such as art therapy, group sessions as well as cooking and nutrition workshops. The loggia is a pleasant outdoor space where one can get some fresh air and socialize. The kitchen space is thought to be for therapeutic workshops through cooking. Young people and their parents can be taught about nutrition and given recipes to recreate on their own at home.





Left: Photograph from an outpatient unit with a framed view of the outdoor vegetation. ©CLR architectes

Right: End of hallway with a framed view and alcove. ©CLR architectes

Inpatient rooms offer privacy with the provision of single-bed rooms. The sense of home can be felt through the choice of materials. The use of wooden parquet and other wooden elements such as doors, window frames, handrails and customized pieces is highly present in the building. The height of the wooden counters at reception areas were adapted for handicapped individuals and children. The generous use of wood in the MEA can be seen as a nature analogue, one of the different patterns of biophilia, which provides an indirect experience of nature using specific materials. Its combination with the control of the noise level by acoustic materials and adapted thicknesses of architectural elements, takes part in creating a calm and therapeutic environment for patients, affecting their healing process in a positive way. The outdoor views of the surrounding nature such as the MEA's garden and the quality of natural light also contribute to creating an effective healing environment. On a side note, part of the facility's garden is planned to have vegetable patches. These could be part of a therapy program for certain patients, but it is also imaginable that citizens participate in planting activities.

As previously mentioned, the MEA is also characterized by its playfulness through its architectural design, its cultural program, use of colors, positive distractions (image projections, fantastical creatures, entertainment) and mysteries for children to discover. Moreover, it provides a therapeutic and comfortable environment for children, adolescents, or young adults with mental health conditions. Mental health can be destigmatized not only through this building's strategic position within the city and proximity to schools, facilitating the accessibility to the facility, but also through its architecture and organization of program. The ground floor's mixed nature is certainly one of the keys to creating a bridge between the community and mental health, as well as promoting the importance of mental health from a young age on.

4.2 De Korbeel and De Patio Child and Youth Psychiatric Hospital

KORTRIJK, BELGIUM - 2022 - VK architects+engineers

Site plan of the De Korbeel child and youth psychiatric hospital.



De Korbeel and De Patio child and adolescent psychiatric hospital is located in the town of Kortrijk along the Langemeersstraat and was opened in 2022. It is connected to the urban center and located next to one of the historical city parks, Groeningepark. The mental health facility was also built on the site of the former Sint-Jozef Institute. The school was demolished to welcome the new hospital. One of the adjacent complexes is the Mental Health Hospital H. Family which has provided psychiatric care for adults since 1950. The two buildings now create a centrally located mental healthcare campus for children, adolescents, and adults. Historically speaking, De Korbeel is known to be the first child and youth psychiatric hospital that appeared in Flanders. De Patio is also the only youth forensic psychiatric unit in the region that appeared in 2007. Given the expansion in the recent years of mental healthcare for younger people in the area, a solution was to group De Korbeel and De Patio into one mental health center that is easily accessible for citizens.

¹³² Tim Abrahams (Architectural Record). "VK's De Korbeel Youth Hospital opens out to the Community". Accessed 11 November 2023. <https://www.architecturalrecord.com/articles/16345-vks-de-korbeel-youth-hospital-opens-out-to-the-community>.

In terms of mental healthcare, De Korbeel provides inpatient, outpatient and intermediate psychiatric care for children or adolescents who have mental health conditions like depression, psychosis, autism etc. De Patio, which is also part of the complex for young individuals, provides care for adolescents aged 12- to 18-year-olds with psychiatric conditions and that are supervised by the juvenile court.¹³²

Architecturally speaking, the building is rather large-scale but gives the sense of a smaller-scale facility in the eyes of a patient, visitor or staff. Indeed, the building works with a system of patio houses and related gardens or terraces. Three patio houses are connected on the Lange-meersstraat side with gardens and a city wall. On the side of the park, there are two patio houses which possess their own enclosed garden. All the patio houses are connected by a street, perpendicular to the main one, which is not only meant as a playstreet for children to play safely, but also as a more direct path linking the different sectors of the building in case of emergency. It also links the main street to the park for pedestrians or bikers.¹³³ The building integrates itself into the cityscape not only in terms of materiality with the use of bricks for the façade, but also through its similar height to the surrounding buildings. One can also observe the generous spaces given to the psychiatric facility and its more horizontal nature, made possible with the large plot of land.

¹³³ VK architects+engineers. "Child and Adolescent Mental Health Hospital: A Playful and Positive Design Strategy". Accessed 2 December 2023. <https://www.vk-architects-engineers.com/en/news/child-and-adolescent-mental-health-hospital-a-playful-and-positive-design-strategy>.



View of the De Korbeel hospital next to rowhouses and its red clinker play street.
©Klaas Verdru



De Korbeel hospital drone view. The red brick building on the left of the complex is the Mental Health Hospital H. Family for adults.
©VK architects+engineers

The organization of the building can be seen as a central spine linking all five patio houses together. This also gives the building a clear circulation system and simple wayfinding, which is an important part of a patient's experience within the facility and prevents feeling additional stress. The central spine on the ground floor also contains functions, such as a communal kitchen, staff spaces and living spaces for patients.

Level 0 - De Korbeel
Circulation spaces.

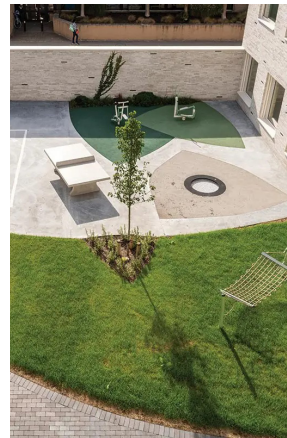


On the ground floor, two courtyards on each side of the central spine have been created. These have been designed as gardens or playgrounds. All inpatient rooms have been placed on the same floor and are separated into living group units with patients of the same age category. These different living group units each have their own patio garden with outdoor facilities suited to their age. While younger children may have a playground with hopscotch, sandpits and swings, the older patients have a basketball ring, ping pong tables and outdoor fitness equipment. Each living group has private bedrooms, spaces to socialize such as living rooms and outdoor spaces with gardens or installations to play or do sports. This was done with the aim of creating a healing environment for young patients and to offer them possibilities of spending time on their own or to socialize.¹³⁴

¹³⁴ Tim Abrahams (Architectural Record). "VK's De Korbeel Youth Hospital opens out to the Community". Accessed 11 November 2023. <https://www.architecturalrecord.com/articles/16345-vks-de-korbeel-youth-hospital-opens-out-to-the-community>.

Level 0 - De Korbeel
Courtyards.





Left: Double height sports hall on first level of the De Korbeel facility.
©Klaas Verdru

Right: Courtyard by the main road with recreational installations for adolescent patients. ©Klaas Verdru

The psychiatric hospital possesses a surface of 7620 m² spread out on two floors with some double height spaces on the first floor (for the sports hall for instance). To ensure good supervision of the children and adolescents in indoor and outdoor situations, it was decided that the private rooms for patients be put on the same floor as the courtyard spaces, enclosed by brick walls of varying heights. These walls separate the public street from the recreational outdoor space of the young patients and ensure a safe playspace for younger children. During the day, the two levels of the building are used. The ground floor is mostly used by residents and staff; however, some rooms have been attributed to outpatients. The first floor is used for day therapy sessions, therapeutic mediation, or sports. During the night, only the ground floor is used.¹³⁵

¹³⁵ Tim Abrahams (Architectural Record). "VK's De Korbeel Youth Hospital opens out to the Community". Accessed 11 November 2023. <https://www.architecturalrecord.com/articles/16345-vks-de-korbeel-youth-hospital-opens-out-to-the-community>.

- 1 Spaces for day therapy sessions, therapeutic mediation (dance studio, music room, classrooms) and sports hall
- 0 Inpatient and outpatient / intermediate care rooms
 - 45 bedrooms for individuals aged 5 to 18
 - 6 outpatient rooms

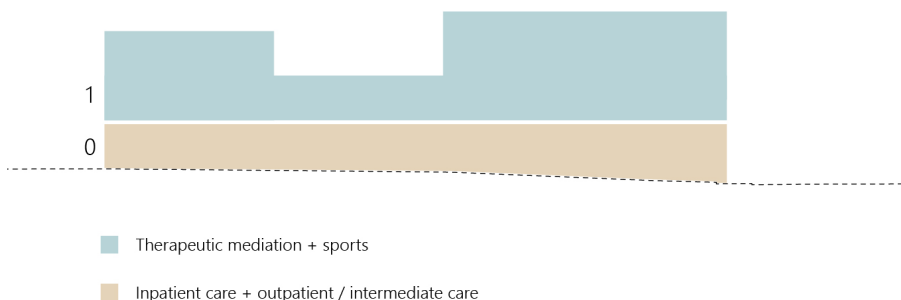


Diagram of program by levels - De Korbeel.

Psychiatric hospital with different types of care.

Level 0 - Organization of functions in the De Korbeel child and adolescent psychiatric hospital.



Drone view of one of the facility's courtyards by the main street, with recreational installations for children.
©VK architects+engineers

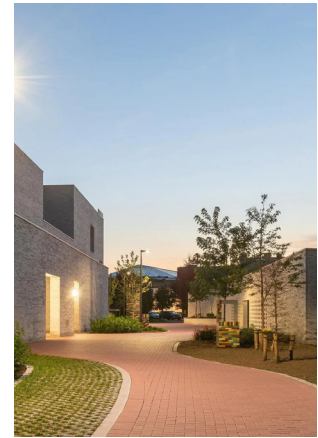
The inpatient and outpatient rooms are positioned on the different branches that extend out from the central spine. One arrives to the entrance of the building by taking the soft mobility pathway, perpendicular to the main street, which also connects the city to the Groeningepark.

The outpatient unit is located the closest to the entrance of the facility. Patients who are part of the day clinic program can use these rooms during the day as well as the spaces on the first level for consultations or therapies, such as mediation therapy. On the opposite side of the outpatient unit, lies the forensic youth psychiatric department. It offers long-term and intensive treatment, which lasts at least six months. Through the creation of this central spine, there is a clear circulation system within the facility. Patients can reorient themselves by going back to the interior "main street", in case of doubt. Along the central spine are mostly communal spaces, living spaces for residents and rooms for staff, such as offices or meeting rooms.

Playfulness is also a characteristic that is prominent in the project. While the façade may have a more serious and imposing aspect through the white nuanced bricks, there has been a play in the pattern with the integration of green glazed bricks. The use of white bricks in fact refer to the historical townhouses in the city. The original foundation stone of the former school on the site, which was demolished, has in fact been preserved and is part of the De Korbeel façade. Red clinker has been used to pave the play street, giving it more vibrance and playfulness. The windows have been arranged in a playful manner with different spacings between them or different heights, creating more variety in the façade and providing interesting views of the outdoors. The varying heights of the courtyard brick walls also contribute to a playful architecture. In addition, colorful sculptures have been integrated into the project and provide moments of contemplation, fun and places to meet others.

The design of the interior spaces was part of a participatory process with users that could assess their quality and give feedback. The outdoor gardens of the facility are therapeutic for patients and can help in calming them down. The architecture of the facility also plays its part. The building has been designed to provide a healing environment for these young patients and enable them to de-stress. Each room has access to natural lighting through a window. Shutters have been installed for every room, offering sun protection and more privacy. The patient rooms are organized around the garden patios and provide visual contact with nature. In addition, through the creation of the playstreet on the side of the building, more natural light could be brought into the ground floor.¹³⁶

In terms of material and color use in the interior of the building, there was a willingness to use warmer tones to create a cozy atmosphere. Furniture with simple design and calm colors were chosen to match with the tranquil spaces. The use of wood was largely favored in the design of the interior spaces. This is an indirect way of introducing biophilia in the architecture, which can have a positive impact on the healing process of patients and their well-being within the facility. While the structure of the building is in concrete, partitions and frames are made from a light-colored tropical wood called "koto". Moreover, to ensure an adequate noise level within the facility, the hallways and ceilings have been acoustically insulated with wood-wool cement panels. The combination of the previously mentioned materials generates a calm and stable atmosphere.



Red clinker playstreet, a path also used daily by citizens to access the public park.
©Klaas Verdrú

¹³⁶ VK architects+engineers. "Child and Adolescent Mental Health Hospital: A Playful and Positive Design Strategy". Accessed 2 December 2023. <https://www.vk-architects-engineers.com/en/news/child-and-adolescent-mental-health-hospital-a-playful-and-positive-design-strategy>.

¹³⁷ Tim Abrahams (Architectural Record). "VK's De Korbeel Youth Hospital opens out to the Community". Accessed 11 November 2023. <https://www.architecturalrecord.com/articles/16345-vks-de-korbeel-youth-hospital-opens-out-to-the-community>.

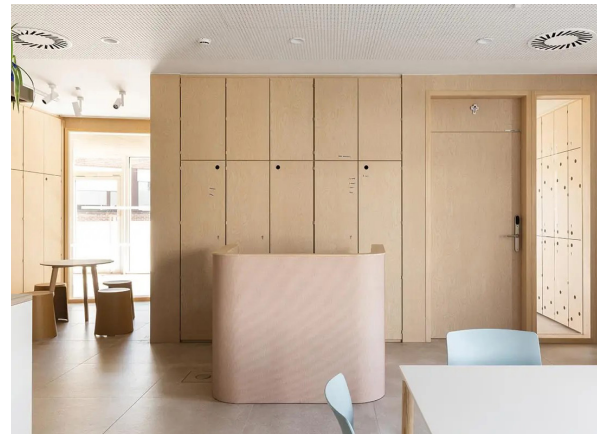
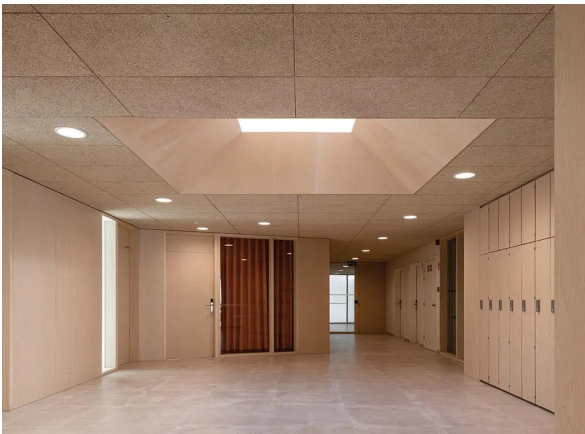
Top left: Hallway with zenithal opening for natural lighting. ©Klaas Verdrú

Top right: A combination of materials, colors and furniture creating a calm setting in the hospital. ©Klaas Verdrú

Bottom left: Playspace for young patients with colorful furniture and alcoves. ©Klaas Verdrú

Bottom right: A resident's bed, integrated into a fully wooden alcove with storage space and lights. ©Klaas Verdrú

Since some patients can have violent outbreaks, creating a safe environment to lower any potential risk of getting hurt, was a major concern. The patient rooms have been designed accordingly. Every room has customized floor-to-ceiling woodwork made from maple plywood. The notion of safety or refuge can also be seen through these elements. While they may provide spaces for storage or hide wash basins that can be locked away to protect a patient from hurting themselves, they can also provide safe spaces. Colorful alcoves have been integrated into the walls, creating simultaneously safe play spaces for children and storage possibilities. Alcoves have also been used in the design of inpatient rooms. In fact, the patients' beds have been fully incorporated into niches that have integrated lighting and built-in shelving for storage. Being in this space can give a patient a sense of comfort and become a safe bubble they can retreat to. This was also a way to fix the beds to the floor so that patients would not be able to move them to block their doors.¹³⁷



While there were some security concerns during the design process, the architecture of the building shows that it is possible to create spaces that are not only safe for patients, but also humane and comfortable. Some architectural elements have been adapted to the building's users. This is for example the case with the presence of two handrails for the stairs. One is adapted for children, while the other for adolescents and adults.

De Korbeel suggests the term "corbel" in its name, referring to a structural support. In fact, the psychiatric hospital also acts as social support for these young individuals affected by psychiatric conditions. The mental health facility houses two studio apartments for patients that are transitioning into adulthood and gives them the possibility to live more independently, under supervision. This is a way for patients to learn how to take care of themselves before leaving the facility and moving to a social housing.¹³⁸

Top left: Staff spaces on the ground floor with furniture matching the staircase. ©Klaas Verdrú

Top right: Dayroom for residents. ©Klaas Verdrú

Bottom left: Integration of the mental health facility within the neighborhood. ©Klaas Verdrú

Bottom right: Playstreet leading to the main entrance of the building, the bike garage and the park. ©Klaas Verdrú





Blue staircase with two handrails placed at different heights. Safety nets have been placed between the balustrade and ceiling.
©Klaas Verdru

All in all, we can see that through its central urban integration, the psychiatric hospital for children and adolescents manages to provide direct access to mental healthcare. Through its strong architectural presence in the cityscape, it promotes the importance of mental health and participates in destigmatizing the subject among the community. An interesting strategy that has been used to better integrate the building into the urban fabric is that of creating a safe and colorful playstreet for its patients that simultaneously provides citizens of Kortrijk with a soft mobility pathway that they can use every day, connecting the city and public park. As a citizen, stepping onto the psychiatric hospital's grounds every now and then, and seeing some young patients playing outdoors can help in reducing the stigma surrounding mental health. The architecture of the child and youth psychiatric hospital is designed in a way that it integrates the patients into the community, while still giving them privacy, therapeutic and safe spaces, where they can seek help and receive treatment.

¹³⁸ Tim Abrahams (Architectural Record). "VK's De Korbeel Youth Hospital opens out to the Community". Accessed 11 November 2023. <https://www.architecturalrecord.com/articles/16345-vks-de-korbeel-youth-hospital-opens-out-to-the-community>.

Level 0 - Plan of the De Korbeel Child and Adolescent Psychiatric Hospital with its outdoor spaces, including the playstreet, bike garage and courtyard gardens.



4.3 Children's Day Hospital

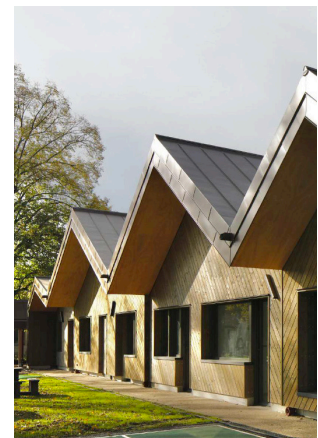
CHEVILLY-LARUE, FRANCE - 2020 - Tolila+Gilliland



Site plan of the Children's Day Hospital in Chevilly-Larue.

The children's day hospital in Chevilly-Larue, located in the southern suburbs of Paris, is both a mental healthcare facility and a school. It is situated between an industrial and residential area, next to the Departmental Park of Petit-le-Roy and a Spiritan center. Since the building has been positioned close to the park, it has a quiet and tranquil setting, with many tall trees close by.

The facility is part of the Fondation l'Élan Retrouvé and welcomes children aged four to fourteen with autism spectrum disorders or other pervasive developmental disorders. This mixed-use intermediate care structure has a capacity of 25 to 27 children. Depending on the patient's situation, mental healthcare can be proposed for half a day to a full day. It is in this therapeutic environment that patients who are attending another school can benefit from academic support. In the case where patients are not schooled, the day hospital of Chevilly-Larue can become their school of reference. Since the building's program combines the function of a psychiatric day clinic with one of a school, the staff comes from very diverse backgrounds. The multidisciplinary staff includes psychiatrists, psychologists, psychomotor therapists, nurses, social workers, specialized teachers, and a sports teacher. In terms of therapy, therapeutic workshops are proposed to children. This includes expressive or pedagogical therapy as well as therapeutic mediation.¹³⁹



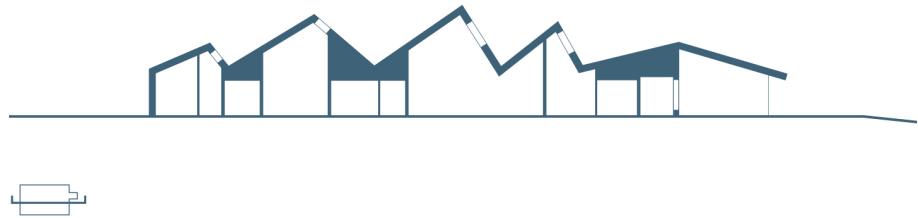
Children's Day Hospital with its continuous roof and volume evoking attached houses. ©Philippe Ruault

¹³⁹ Fondation l'Élan Retrouvé. "Hôpital de Jour de Chevilly-Larue". Accessed 9 December 2023. <https://www.elan-retrouve.org/places/hopital-de-jour-de-chevilly-larue/>.

¹⁴⁰ Tolila+Gilliland. "Children's Day Hospital in Chevilly-Larue". Accessed 9 December 2023. <https://tolilagilliland.com/Children-s-Day-Hospital-Chevilly-Larue>.

The main concept behind this architectural project was to propose a rather small-scale building on one level that would be adapted to its users. This would enable patients to feel comfortable and reassured after becoming familiar with the spaces. In terms of volumetry, it has been designed as juxtaposed volumes with varying roofs, giving it the image of small attached houses.¹⁴⁰ The building has a rectangular footprint and a surface of 625 m², with a generous outdoor space surrounded by park trees on the southern part of the site. Since the mental health facility and school extends itself on the ground floor, there is a smooth transition between indoor and outdoor spaces.

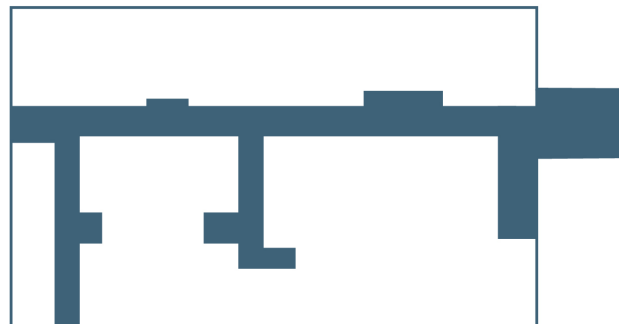
Children's Day Hospital in Chevilly-Larue Section.



¹⁴¹ LA RÉDACTION. "Hôpital de Jour à Chevilly-Larue Par Tolila+Gilliland". Accessed 9 December 2023. <https://chroniques-architecture.com/hopital-de-jour-chevilly-larue-tolila-gilliland/#:~:text=L'atelier%20Tolila%20%2B%20Gilliland%20,du%20spectre%20de%20l'autisme>.

Circulation inside the building functions through a main hallway, which traverses the entire length of the building. This path leads the users of the building to different therapeutic workshop areas and at the end of the corridor, outdoors. Connecting the main hallway to the outdoors on two ends of the building was an important consideration when thinking about how to facilitate the orientation of patients within the facility.¹⁴¹ Indeed, it is easier to navigate hallways and find one's way in a building when one has an external reference.

Level 0 - Children's Day Hospital in Chevilly-Larue Circulation spaces.



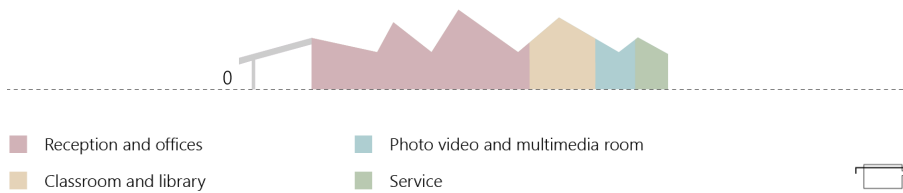


Diagram of program - Children's Day Hospital in Chevilly-Larue.

The volumes for each room in this building are unique and can thus be adapted for different patients and host specific activities. Spaces have been designed so that they can be modifiable and flexible as well as offer comforting views of the park. The psychiatric intermediate care building houses rooms for consultation, therapy, and education. There are also spaces for different types of workshops such as a painting, crafts, gardening, multimedia visioning, sports, theater, and reading. The building also features a Snoezelen room. It is a multisensory room, which is often used in mental healthcare facilities and schools for therapy. This relaxing safe space can help soothe a patient and reduce their anxiety levels. In addition to a spacious multifunctional room, there are also offices for staff. In the large kitchen and dining room, cooking workshops can be held, and meals shared together.¹⁴² The plan below shows the organization of spaces be it for children's therapy and education, or for staff. The building's program shows how it functions as a day hospital and a school. In fact, the following photos of the day clinic suggest its dual program.

¹⁴² fondation des hopitaux. "Favoriser le Bien-Être à l'hôpital de Jour de Chevilly-Larue". Accessed 11 December 2023. <https://www.fondationhopitaux.fr/favoriser-lamelioration-du-bien-etre-a-l-hopital-de-jour-de-chevilly-larue/>.



Level 0 - Children's Day Hospital in Chevilly-Larue. A building that combines therapy and education.

Top left: A playful day hospital architecture with an image of wooden attached houses. ©Philippe Ruault

Top right: Painting workshop at the day clinic.
©Philippe Ruault

Bottom left: Main hallway characterized by its wooden materiality and outdoor views. ©Philippe Ruault

Bottom right: Luminous shared space by the façade with in the foreground, a window sill that can be used as a seat. ©Philippe Ruault

An essential quality the building presents is playfulness. This can already be seen through the proposed volumetry of the facility, mimicking village rowhouses of differing heights. The roof slope of each house varies according to the function of the space underneath. Hallways and spaces for therapy or education benefit from natural skylight through zenithal openings. The roof is one continuous element, composed of colorful zinc. The facility has been built as a timber frame construction with a wooden façade. The façade of the building is clad in wooden elements, which have been placed with different orientations, giving it a playful and inviting appearance that fits well with the park setting.



The day hospital for children can be seen as a hybrid between a mental healthcare facility and a school. The scale of the project was adapted to the young users of the building. The architects collaborated closely with staff to create therapeutic and pedagogical spaces that would feel comfortable for children. There are many components in the project which contribute to creating a healing environment. Firstly, rooms were designed with specific intents in what type of atmosphere they would generate. The room's function also determines whether it is a meditative space or one that favors social interactions. There are safe and quiet spaces where patients can retreat to, and more animated spaces.



Noise Levels - Day Hospital for Children in Chevilly-Larue

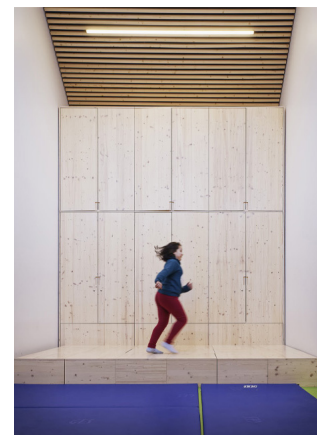
- Low noise level
- High noise level



Diagram of noisy and quiet areas - Children's Day Hospital in Chevilly-Larue.

The importance of having a balance between quiet areas and more noisy ones in the facility was an important factor to consider in the project. Given that individuals who have an autism spectrum disorder or another pervasive developmental disorder can be very sensitive to sounds and highly affected by them, it was crucial to consider the different noise levels within the facility. The acoustic level in the calm rooms can have stimulating effects on a child's senses. There are also spaces dedicated to education and teaching, where noise levels can help children to concentrate. Finally, workshop spaces where group activities take place are also spaces where children and staff can socialize and bond together. Being in these rooms, one is most of the time exposed to a higher noise level in

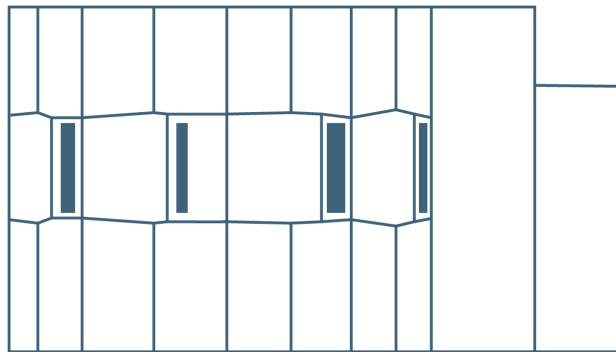
Day hospital's sports room.
©Philippe Ruault



¹⁴³ L'Observatoire CAUE.
"HÔPITAL DE JOUR POUR
ENFANTS". Accessed 9
December 2023. [https://
www.caue-observatoire.fr/
ouvrage/hopital-de-jour-en-
fants/](https://www.caue-observatoire.fr/ouvrage/hopital-de-jour-enfants/).

comparison to the other spaces. Along with the study of acoustic levels and natural lighting within the facility, came the question of direct views of the outdoors. In fact, refuge spaces were purposefully designed not only to be quiet spaces, but also more enclosed while benefiting solely from zenithal lighting.¹⁴³ This is for instance the case for the Snoezelen room, one of the safe spaces for children in the day hospital. Activity rooms for groups of children are mostly located on the southern part of the building by the façade. This enables the users of the building to benefit from a large amount of natural lighting through the wide windows as well as to have direct views of the playground and the park. In addition, patients can use the depth of windows as benches for contemplation of nature from the inside of the building. These places can provide shelter and help patients feel safer.

Diagram of skylight windows
- Children's Day Hospital in
Chevilly-Larue.



■ Skylight windows - Day Hospital in Chevilly-Larue

Left: View of the hallway
from the main entrance
space. ©Philippe Ruault



Right: View of the outdoor
spaces and park from the
building. ©Philippe Ruault



In terms of materials used in the construction of the building, wood was favored. Material choices were made with the goal of creating a sustainable and non-emissive building, using bio-sourced materials. The structural beams are in spruce wood, while the façade is composed of wood fiber insulation and clad in douglas fir wood. The interior fittings include a floor in natural rubber, walls clad in spruce wood and dropped ceilings in the same material. These naturally contribute to creating a pleasant and gentle atmosphere. Not only does the use of wood give the facility a warmer and more inviting appearance, but in terms of touch and acoustics, it is also very suitable for children. Using wood as the main building material has biophilic and healing effects on young patients. Moreover, there was fine attention given to safety, such as studying door hinges so that children cannot injure themselves by getting their fingers stuck. Another safety measure that was taken was the softening of interior corners in wood to prevent injury.¹⁴⁴

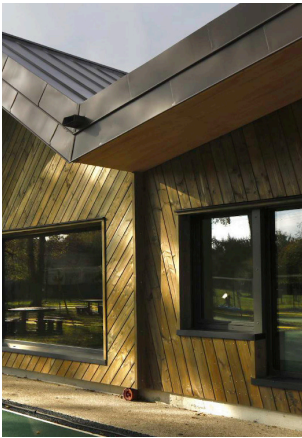
All in all, the day hospital for children in Chevilly-Larue presents a mixed-use program that combines therapy and education for children with autism spectrum disorders or other pervasive developmental disorders. The intermediate care structure has similar opening hours to regular schools. The architecture of the building was clearly adapted to its users through its scale and healing architecture qualities: playfulness, clear wayfinding, refuge spaces, social spaces, natural lighting, materiality, and direct views of nature. The project proposes both spaces of refuge or shelter and spaces for social interaction. These considerations are key in creating a building that is adapted to young patients and can help them in their respective therapies.

¹⁴⁴ Chroniques d'Architecture. "Hôpital de Jour à Chevilly-Larue Par Tolila+Gilliland". Accessed 11 December 2023. <https://chroniques-architecture.com/hopital-de-jour-chevilly-larue-tolila-gilliland/>.

Left: Photograph of the day hospital with its timber frame construction.
©Camille Gharbi

Right: View of the day hospital from the playground.
©Philippe Ruault

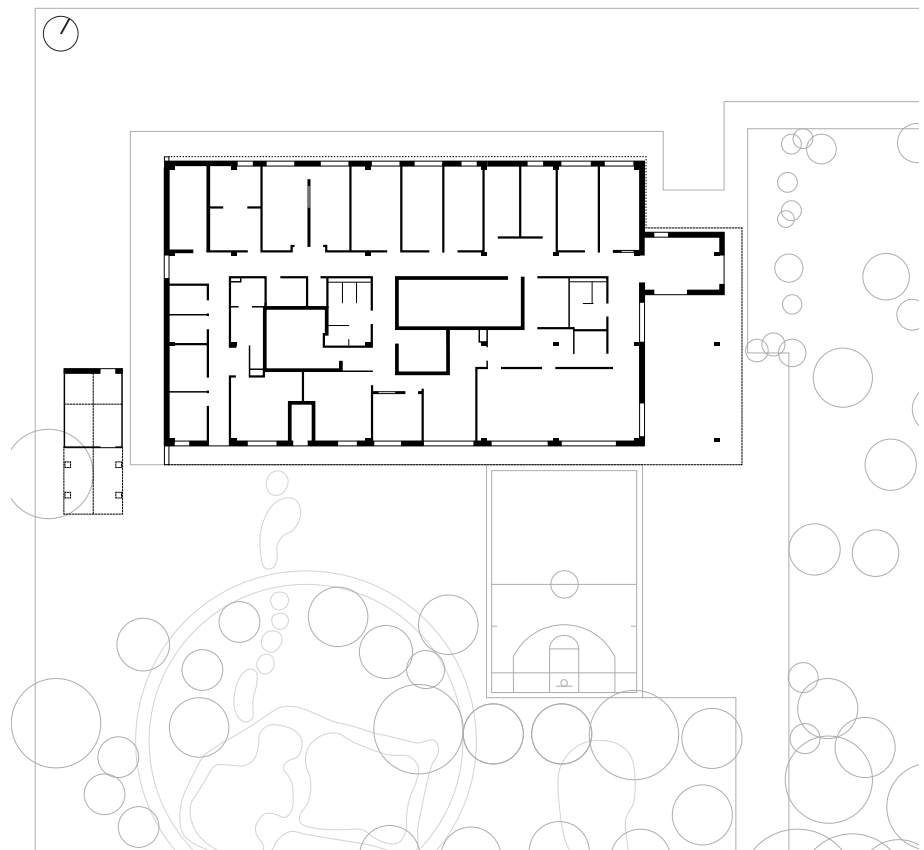




Zinc roof and playful façade cladding in douglas fir wood.
©Philippe Ruault

The strategy of combining both a day hospital and a school under one roof, can be beneficial in following a patient through his or her therapeutic and educational journey. Moreover, while the day hospital is not located in a very dense urban setting, its location is convenient since it is close to the vast Departmental Park of Petit-le-Roy. One can easily go to the day hospital by public transport be it by tram or bus. The day hospital for children can directly benefit from its rather quiet and tranquil setting near the park and still be in relatively proximity to residents. Another quality that was briefly mentioned previously was the seamless transition between interior and exterior spaces. By looking at the plan of the facility below, it becomes evident that much of the plot of land was kept as outdoor space. This generous outdoor space linked to the facility with a playground, game court and garden are essential for the well-being of its daily users, promoting health and social interaction.

Level 0 - Plan of the Children's Day Hospital in Chevilly-Larue with its outdoor spaces.



4.4 Children Health and Support Center

KITAKAMI, JAPAN - 2021 - Unemori teco Associates / UtA



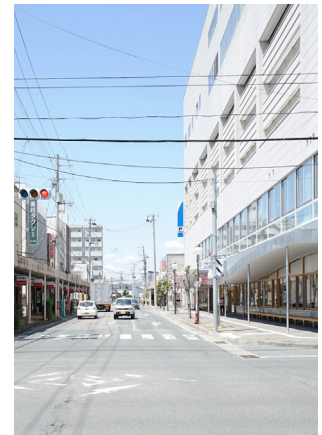
Site plan of Kitakami's Children and Health Support Center.

Adapted from site plan by ©UtA

The Kitakami Children Health and Support Center is a multifunctional health facility located in the heart of Kitakami, a city in the Iwate Prefecture of Japan. The project consisted in the conversion of the two lowest floors of an eight-storey commercial building from 1999. The commercial building, which now also houses the health and childcare center, has a direct connection to an adjacent shopping mall via a bridge. Just above the two floors of the facility, there is a parkade with ramp access on the north side of the building. On the site plan above showing the health facility in its urban context, it becomes evident that it possesses a large footprint (with the adjacent shopping mall) in comparison to other buildings in the area. The health and childcare center has a total surface of approximately 4000 m². It has been designed as an indoor park or landscape with undulating ceilings and floors.

Strong points in this architectural project include its park-like spaciousness, its openness to the community and its urban integration. In fact, the main atrium of the building was designed as an indoor plaza, welcoming citizens of any generation inside. One of the intentions in this mixed-use facility was to create an architecture for a children health and support center that would not directly be associated to the architecture of a clinic. This resulted in creating a facility that the community would feel comfortable visiting freely. This building is truly a place where one can walk in and wander around without having a specific destination in mind.¹⁴⁵

Kitakami Children Health and Support Center from the main street. Above the center lies a multistorey parking and commercial spaces.
©Kai Nakamura



¹⁴⁵ Jincy Iype. "Inside the Porous, "Park-like" Kitakami Health & Childcare Support Complex". Accessed 11 December 2023. <https://www.stirworld.com/see-features-inside-the-porous-park-like-kitakami-health-childcare-support-complex>.

The two transformed floors of the commercial building not only host the health center, but also spaces dedicated to the community including a café, exhibition space, community kitchen, indoor playground and offices.

Level 0 - Kitakami Children Health and Support Center. A building open to the city, combining healthcare, offices and community spaces.

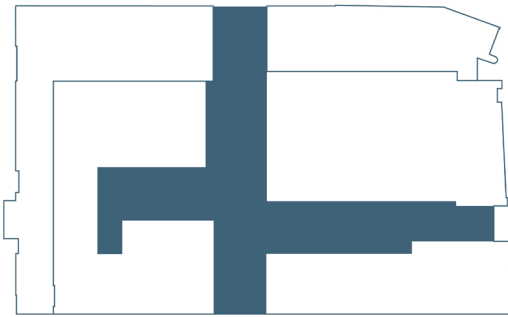


One can access the building through three entrances with large sliding doors on the ground floor. The main entrance is located on the southern part of the building, which is also characterized by an undulating roof and transparent façade, welcoming visitors inside. Since the commercial building has a very rigid and rational structure, one of the architects' aims was to create an indoor landscape that could bring more life, suppleness, and warmth to the interior space. This explains the design of undulating architectural elements and materials that evoke warmth and comfort.

Main entrance of the Kitakami Children Health and Support Center by night.
©Kai Nakamura



The facility is an open space, punctuated by structural pillars and sectioned for different functions through partitions. Circulation spaces on the ground floor encompass community spaces. Like in the streets outside, the circulation space inside acts as a public place with the daily flux of people. It is also a space for meetings and where social gatherings can take place. Circulation spaces run from the north gate to the south gate and the east gate towards the western part of the building. On the first level, above the east gate, a bridge connects the facility directly to the adjacent mall. This facilitates access to the multifunctional center.



Far left: View of the hallway from the main entrance space. ©Kai Nakamura

Left: View showing the multi-functionality of the building. ©Kai Nakamura

Right: Ground floor, characterized by a soft floor and warm toned materials. ©Kai Nakamura

Far right: View of the first level from the east side of the building with the Kitakami City Office on the right. ©Kai Nakamura

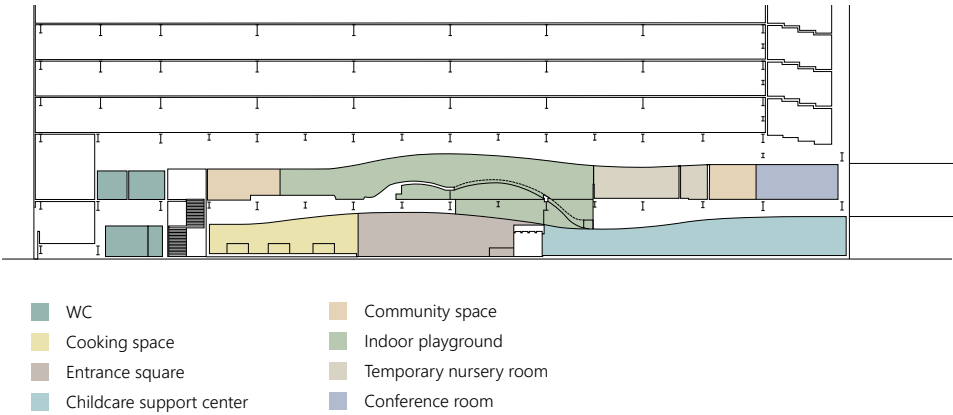
Level 0 - Kitakami Children Health and Support Center Circulation spaces.

On the ground floor, there is a childcare support area and a medical examination hall. The facility offers medical checkups and consultations for children and parents on two levels. Counseling sessions and group sessions are offered as well. On the lower floor, one can also find a café, a cooking workshop space, a dining area, and a spacious event hall, which can be used for conferences or exhibitions.¹⁴⁶ While this building is a children health and support center, it becomes a community center through its varied public program and architecture.

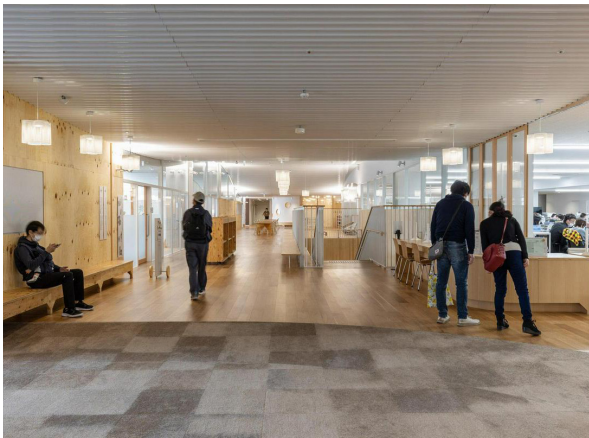
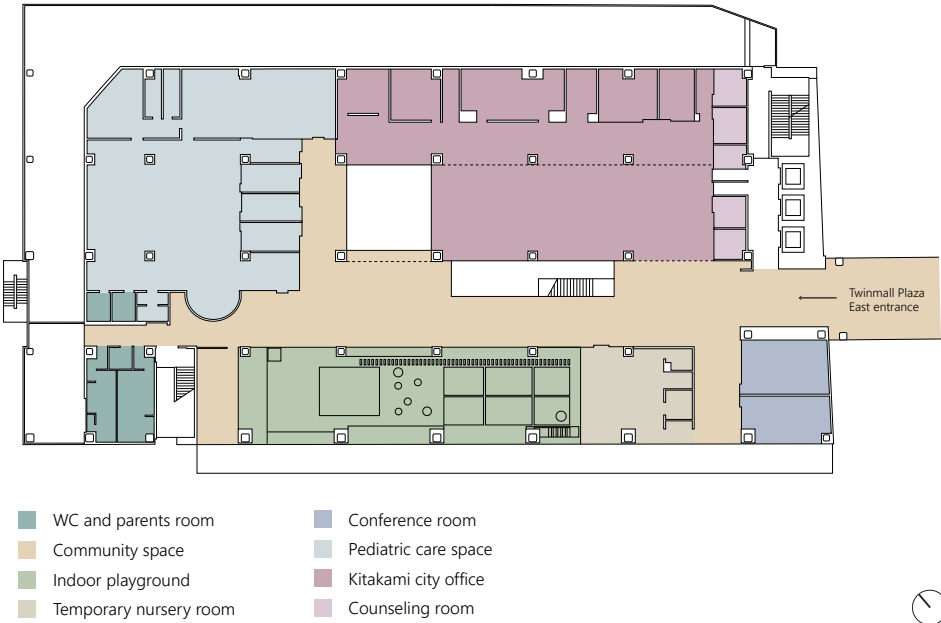
¹⁴⁶ Kitakami City. "Introducing the Kitakami City Health and Childcare Support Complex hoKko!" Accessed 11 December 2023. <https://www.city.kitakami.iwate.jp/life/soshikikarasagasu/kenko/iryoren-keikakari/hokenkosodateshienhukugoushitsu/19227.html>.



Section showing multifunctional program - Kitakami Children Health and Support Center.



Level 1 - Kitakami Children Health and Support Center. A bridge links the center directly to the adjacent shopping mall.



On the first floor, the functions of spaces are also varied. The pediatric care space is located on the northern side of the building and has medical examination rooms for children. Other spaces destined for children include the temporary nursery room and the indoor play space. The indoor playground by the southern façade is a playful wave-like bridge made from wood and mesh. This architectural gesture contributes to creating more movement along with the undulating ceilings within the rigid and rationally structured facility. The Kitakami City Office is also located on the first level. In addition, there are conference rooms that external companies can rent for meetings. Different types of furniture have been placed in the large hallways, which are spaces the community can use freely.

The mixed-use building manages to combine spaces dedicated for children be it for health or support with spaces that all generations of the community can use. Moreover, there is no need to have a specific reason to roam in the building. One can simply take a stroll in this indoor park-like complex without an appointment or professional reason. The proximity of certain functions such as the city office and indoor playground contribute to adding an element of surprise and playfulness in the building. Indeed, the multifunctionality of this facility can be fascinating to discover. The undulating floors and ceilings certainly create dynamic and playful spaces. The southern façade also translates this well onto the exterior with the presence of a wave-like roof, covering part of the sidewalk. In terms of lighting, the two floors benefit from ample natural lighting since the façade has been altered to become transparent. The building was quite opaque before the transformation of its two lower floors. Given that the building has a large surface, it was necessary to get in as much natural light as possible.¹⁴⁷

Left: View of the indoor playground that is shaped like a bridge. It is composed of wood and mesh.
©Kai Nakamura

Right: View upon entering the facility on the ground floor. The metallic grid on the slab sections reveal the original structure and technical installations. ©Kai Nakamura

¹⁴⁷ Jincy Iype. "Inside the Porous, "Park-like" Kitakami Health & Childcare Support Complex". Accessed 11 December 2023. <https://www.stirworld.com/see-features-inside-the-porous-park-like-kitakami-health-childcare-support-complex>.



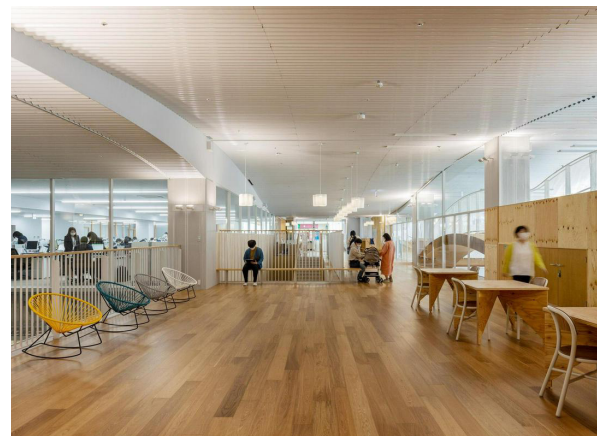
Left: Dining area characterized by the generous use of wood. ©Kai Nakamura

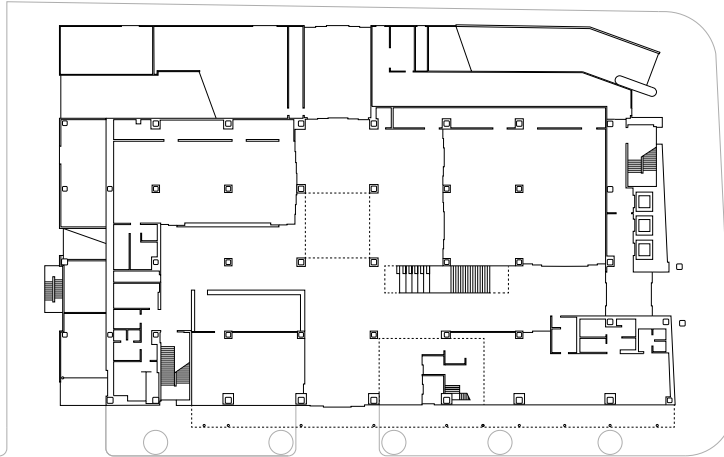
Right: View from the circulation space on the first floor with access to the Kitakami City Office and the playground. ©Kai Nakamura

On the ground floor, lights were also integrated in the translucent ceiling. This ensures sufficient lighting within the facility and highlights simultaneously the wavy nature of the ceiling, giving it a sense of depth. The different heights in the ceiling create a softness in the architecture and make it possible for medical examination vehicles or catering vehicles to be parked directly inside the facility. The width of the entrance and floor material in the area have been adapted to accommodate these.

The façade of the complex is mostly in glass with large entrance doors, adding to its openness to the city. To show the existing structure of the building, the architects chose translucent or transparent materials. These include perforated metal sheets for pillars, corrugated polycarbonate sheets for the ceiling and expanded metal sheets for the slab sections. Porous materials such as mesh were also used for the floor of the playground, creating a soft, safe, and fun landing surface for children. There are various other flooring materials in the building, such as polished concrete, wooden parquet and carpet. Curtains have been added in various areas, giving users of the building the flexibility to divide spaces depending on what activities are being held. Wood with warm tones has been used considerably to create comfortable spaces in the public facility. In particular, tactile spaces in the complex that are not only for children, but also for older individuals, possess wooden materiality. As previously seen in other case studies, the use of wood can evoke our biophilic response to it and have positive effects on our well-being. In addition, its extensive use creates a friendly atmosphere that feels more welcoming. Aside from architectural elements, the wooden furniture also contributes to creating a cozy atmosphere.¹⁴⁸

¹⁴⁸ DETAIL. "Health Centre in Kitakami by UtA/Unemori Teco Associates". Accessed 11 December 2023. https://www.detail.de/de_en/gesundheitszentrum-in-kitakami-von-uta-unemori-teco-associates.





Level 0 - Plan of the Kitakami Children Health and Support Center.

While this building is not specifically designed for mental healthcare, it takes part in promoting children's health as a whole within the community. Furthermore, it is an intergenerational indoor public space that citizens can visit freely. This project is one possible answer to the question of how to create a children's health center that can fully integrate itself into the city through its architecture and mixed-use program. Moreover, the project shows that it is possible to transform part of a building that may seem difficult to tackle, given the fact that it was an older commercial building with a car park on multiple levels. Creating an indoor park-like health facility in the city that is adjacent and directly connected to a highly frequented place, such as a shopping mall, is a strategy this project has used. This proximity and direct link to the shopping area certainly facilitates access to the complex among citizens. The center is also close to a high school, making it a favorable study area for some students. In a dense urban area that possesses some outdoor parks, it is beneficial for the community to have a spacious indoor public space that seems like a landscape of its own. It is not only a children health and support center, but also a community center.

Main entrance of the Kitakami Children Health and Support Center by day.
©Kai Nakamura



Individuals of any age can visit the facility since it combines child health-care and support services with other community functions and includes the Kitakami City Office. The architecture of the building was adapted to show its mixed-use nature. It has a mellow and relaxed atmosphere, favorable for children. There was also a willingness to show that this project was a transformation. There are hints in the design of interior spaces and choices of materials, which reveal original structural elements. Combined with undulating forms and the use of warm toned wood, this former commercial space truly manages to become a welcoming multifunctional complex. Since the center also houses an indoor playground, this can help children in creating positive and fun experiences there, reducing their fear of entering the medical center. The ground floor possesses multiple wide entrances that blur the threshold between inside and outside. Not to mention, the entrance square acts as an interior plaza, where public events can be held, and catering vehicles stationed.¹⁴⁹ All these elements take part in conveying the center's openness to the city along with its transparent façade. All in all, the mixed-use nature of the Kitakami Children Health and Support Center, its convenient location and landscape-like architecture are key to its urban integration. It enables the complex to become fully integrated into the city and used by the community.

¹⁴⁹ Jincy Iype. "Inside the Porous, "Park-like" Kitakami Health & Childcare Support Complex". Accessed 11 December 2023. <https://www.stirworld.com/see-features-inside-the-porous-park-like-kitakami-health-childcare-support-complex>.

Left: View of the center from the main street with the large shopping mall next to the facility. ©Kai Nakamura



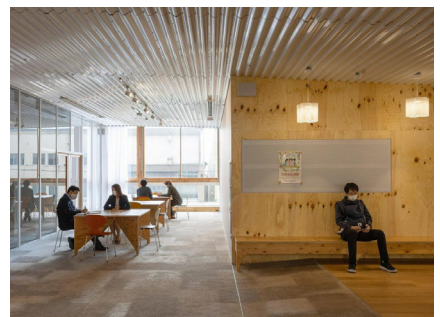
Right: Luminous kitchen workshop space on the ground floor. ©Kai Nakamura



Left: Main entrance roof, characterized by its undulations. ©Kai Nakamura



Right: View of conference rooms and waiting area on the first level. ©Kai Nakamura



4.5 Tzu Chi Humanistic Youth Center

YISHUN CENTRAL, SINGAPORE - 2022 - Kyoob Architects, Grey Canopy



Site plan of the Tzu Chi Humanistic Youth Center.

The Tzu Chi Humanistic Youth Center is a community center for young people in the heart of Yishun Central. The building was commissioned by the Buddhist Tzu Chi Foundation, a non-profit organization. Since it was founded in 1966, this organization has become a global network involved in international disaster relief, charity, education and medicine.¹⁵⁰ Located in a very populated area in the northern part of Singapore, this community-based youth center aims to contribute and promote the well-being of younger generations through a holistic approach. The Tzu Chi Humanistic Youth Center was actually a transformation of the former government polyclinic, which explains its very close proximity to the local hospital facilities: the Yishun Community Hospital and Khoo Teck Puat Hospital.

This project presents two strong points. The first strong point is its strategic location in Yishun Central, facilitating access for young people and making it a well-integrated community center on an urban scale. The facility is easily accessible by public transport (bus or MRT). Moreover, the center's site is located by the Yishun Pond, a tranquil and natural refuge in the very dense district. By the water catchment area, one can enjoy the natural serene setting, have a stroll along the promenade leading to the facility and catch sight of local wildlife, such as otters and egrets.¹⁵¹ The second strong point is the fact that this building has a mixed-use program with holistic and educational activities, open to the community. The center follows five main pillars, which are youth wellness, eco-awareness,



Main entrance of the Tzu Chi Humanistic Youth Center.
©Grey Canopy Pte Ltd /
AndrewPhuaPhotos

¹⁵⁰ Buddhist Tzu Chi Charity Foundation. "Our Founder". Accessed 15 December 2023. https://global.tzuchi.org/about-us_our-founder.

¹⁵¹ Grey Canopy. "Fundamentals of Foundation - Tzu Chi Humanistic Youth Centre". Accessed 15 December 2023. <https://www.archify.com/sg/project/fundamentals-of-foundation-tzu-chi-humanistic-youth-centre>.

¹⁵² Tzu Chi Singapore. "Tzu Chi Humanistic Youth Centre". Accessed 15 December 2024. <https://www.tzuchi.org.sg/en/our-missions/education/tzu-chi-humanistic-youth-centre/>.

¹⁵³ Tzu Chi Singapore. "Youth Wellness". Accessed 15 December 2023. <https://hyc.tzuchi.org.sg/what-we-do/youth-wellness/>.

arts and culture, young parenting, and volunteerism. To incorporate this wide-ranged program, the center functions with external partners.¹⁵² The Tzu Chi Humanistic Youth Center not only promotes physical health in young people, but especially mental health. Prevention campaigns and group sessions or workshops regarding the topic are often held there. The center is indeed very much involved in the destigmatization of mental health. In addition, the facility proposes free counseling services on site, provided by Silver Ribbon Singapore. This gives the possibility for any young person to seek professional help in case of need without having to worry about finances.¹⁵³ There may also be less fear in entering this type of multifunctional facility for counseling sessions. Given its proximity to the hospital, health-related conferences and campaigns can also be conjointly organized.

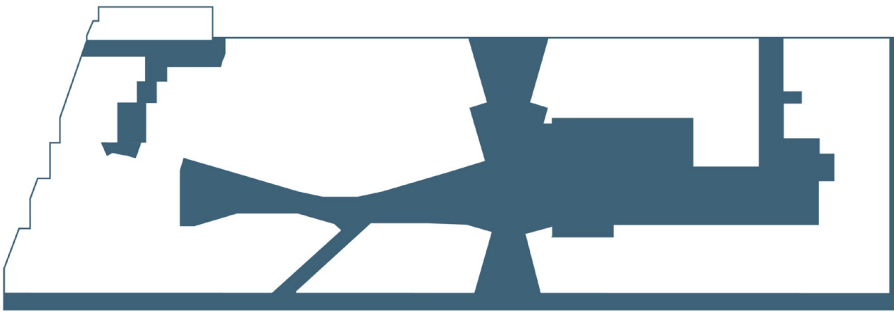
The map below shows the strategic location of the Tzu Chi Humanistic Youth Center. Next to the Yishun Pond and the local park, it offers a quiet retreat for young citizens that are leading their lives in a hectic environment. Most schools of Yishun Central for individuals in their youth (or younger) are located within a radius of 1.2 kilometers from the Tzu Chi Humanistic Center. The facility's proximity to schools is favorable, as it makes it more easily accessible for teenagers or young adults. It also favors potential programs organized with schools.

- Tzu Chi Humanistic Youth Center
- Yishun hospital facilities
- Primary school
- Secondary school
- Junior college
- High school
- Private school
- Special school



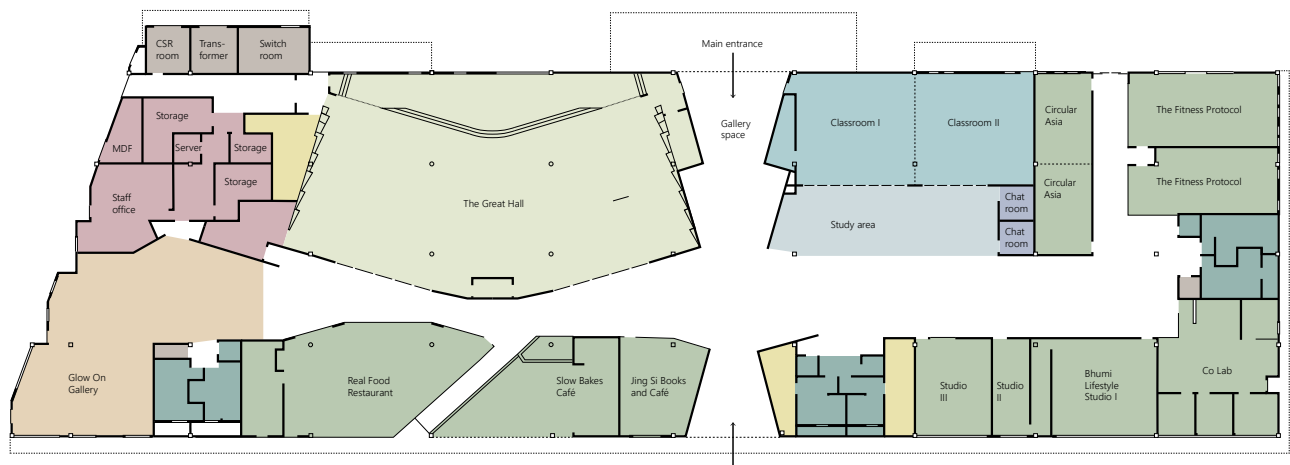
Site plan of the Tzu Chi Humanistic Youth Center and nearby schools.

The center is a large multifunctional open space that has been sectioned into different parts. Circulation throughout the building has been organized in the shape of a cross. There are two main entrances. One is on the street entrance side, while the other connects the facility directly to the promenade by the Yishun Pond. This connection to the park is not only favorable for users of the building who can directly step out of the building and use the outdoor space by the pond for sportive activities, but it is also a pleasant stop for people walking around the pond. On the Yishun Pond Park side, the entrance deck is connected to the promenade by wooden stairs that have been built around an existing tree. There was clearly an intention to preserve the tree and co-exist. There are also secondary entrances, which either lead people directly to the food area from the promenade or connect the driveway to the storage spaces.



Level 0 - Tzu Chi Humanistic Youth Center
Circulation spaces.

The entrance areas can be used as galleries for displaying art and photography. The circulation spaces, named *Broad Ways*, are spacious and wide. They can be seen as indoor streets, which provide the facility with additional spaces for exhibitions and animate the center with retail push-carts. Furniture has also been placed in these areas, providing spaces for waiting, relaxing, and playing. Circulation spaces can therefore be used in many ways by the community and do not solely function for distribution. Moreover, on the side facing the pond, the building's interior spaces seem to extend out into a wooden deck, covered by a roof. This creates a seamless transition between the interior and exterior, especially since the floors are on the same level. In addition, the windows are pivotable and can be fully opened. This enables users of the building to experience a direct connection with nature and allows natural ventilation. The Slow Bakes Café is a semi-outdoor café. There are no windows separating the interior from exterior, simply some shades.



Exhibition space
WC
Service space
Activity space

Staff space
Changing room
Multipurpose hall
Study area

Counseling room
Classroom

Level 0 - Tzu Chi Humanistic Youth Center. A bridge links the center directly to the adjacent shopping mall.

¹⁵⁴ kyoob architects. "Tzu Chi Humanistic Centre". Accessed 15 December 2023. <https://kyoob.sg/tzu-chi-humanistic-centre/>.

¹⁵⁵ Tzu Chi Singapore. "Co-Working Space serves as Platform to foster Mutual Support". Accessed 17 December 2023. <https://www.tzuchi.org.sg/en/news-and-stories/local-news/co-working-space-serves-as-platform-to-foster-mutual-support/>.

The Tzu Chi Humanistic Youth Center is a building on one floor with a surface of 4467 m². It comprises of a large multipurpose hall of a surface of 773 m² that can welcome up to 500 guests. Conferences, performances, and other community events can be held there. There are flexible spaces, such as two classrooms, divided by doors, that can be completely opened to create one spacious room instead.¹⁵⁴ These can be used for seminars, workshops, and talks for example. In front of the classrooms, there is an open space for students to come and study. Since the COVID-19 pandemic there has been a need for hybrid work arrangements in the area. The center thus provides co-working spaces for start-ups, non-profit organizations, or social enterprises.¹⁵⁵

As previously mentioned, mental health is promoted through various events, activities, and workshops. In addition, it is possible to have counseling sessions in the chat rooms or other spaces of the facility depending on the person's preferences. They can be booked for group discussions as well. The center comprises of spaces for other activities that contribute to young people's health and well-being. These include the fitness studio as well as the yoga and pilates studios. The center also houses a restaurant, café, and bookstore café. They have been placed by the promenade and pond as well, offering tranquil outdoor views for relaxation and contemplation. *Circular Asia* proposes educative group workshops and

training to teach youth about circular economy and sustainability. The *Glow On Gallery* promotes a sustainable way of living and proposes exhibitions on the topic of sustainability by looking at the environmental, societal and economic aspects. The facility has been designed with the goal of creating awareness of our environment. This is done through a community program for youth that promotes responsible living and ways one can contribute to taking care of the environment. The center also promotes the importance of mind wellness and provides a tranquil refuge for young people seeking help. This could be for addictions to gaming or social media for instance. Some young people seek help for other addictions, are facing issues in their social circle or are being bullied. Counseling in the center is offered to young people facing any type of issue that is impacting their mental health and overall well-being. The architects decided to create the following types of spaces: "Me and the Environment", "Me and my Friends", "Me and my Family" and "Me and Myself". The first type of space includes activity or workshop spaces and classrooms. The second type includes co-working and collaborative spaces. The third one is for all open common spaces, cafés, and restaurants. The fourth type includes all quiet spaces within the center, where one can retreat solitarily. With these different types of spaces, there was an intention to give possibilities for users of the building to engage socially or to have some time alone.¹⁵⁶ This is clearly in line with a principle that can be found in healing architecture. Designing for flexibility was also important in the project. Elements like pivotable doors or windows help section spaces according to the needs. Since the youth center hosts a large palette of activities and programs, spaces had to be designed for multiple purposes and high configurability.

Left: Entrance gallery space.
©Grey Canopy Pte Ltd /
AndrewPhuaPhotos

Right: Spacious event hall
with pivotable doors.
©Grey Canopy Pte Ltd /
AndrewPhuaPhotos

¹⁵⁶ Grey Canopy with Kyoob Architects. "Fundamentals of Foundation: Tzu Chi Humanistic Youth Center". Accessed 15 December 2023. <https://www.indeawards.com/the-wellness-space-2020/fundamentals-foundation-tzu-chi-humanistic-youth-center/>.



Left: View from the semi-outdoor café with the tranquil Yishun Pond and park in the background. ©Grey Canopy Pte Ltd / AndrewPhuaPhotos

Right: Seamless transition between indoor and outdoor spaces. ©Grey Canopy Pte Ltd / AndrewPhuaPhotos

¹⁵⁷ Liu Anqi (Lianhe Zaobao). "Residents and Migrant Workers work together to paint Colorful Paintings depicting Diverse Cultures". Accessed 15 December 2023. <https://www.zaobao.com.sg/news/singapore/story20230813-1423440>.

¹⁵⁸ Grey Canopy with Kyoob Architects. "Fundamentals of Foundation: Tzu Chi Humanistic Youth Center". Accessed 15 December 2023. <https://www.indeawards.com/the-wellness-space-2020/fundamentals-foundation-tzu-chi-humanistic-youth-center/>.

As previously mentioned, the architectural project was a transformation of a former polyclinic. There was a willingness to show the original structural elements in the new center. However, the walls of the former polyclinic were torn down and a more permeable architecture was introduced. One of the intentions of the project was to highlight the existing nature. To do so, the architects designed a low building that would integrate better into the landscape. This explains the horizontality of the building that extends itself on the ground floor only. Moreover, spaces were designed with a certain homogeneity and neutrality to welcome any type of user inside. This is also compatible with the multifunctionality of the building. The façade of the center on the driveway side is clad in white and teal metal, while on the promenade side, it is mostly in glass. The south-east façade is a colorful mural that has been painted by the community during an event in August 2023. The co-painting was part of a larger movement to unite Singaporean migrant workers and the local communities.¹⁵⁷

Materials and color tones were purposefully chosen to create a calming and muted atmosphere in the building. Spaces are bright and mostly characterized by timber (plywood), concrete, metal, and glass. The idea was to create a more modest and simpler interior to quiet one's mind. In this way, a user of the building would not be overly stimulated by the architecture. Wooden furniture was also designed to be simple and minimalist. Furthermore, the notion of flexibility or multipurpose can be seen in the furniture design. There are for instance modular building blocks that can be stacked and configured in different ways to either create a bench, a pedestal, or a shelf.¹⁵⁸



These modest spaces also enable any visitor to focus on the powerful presence of nature surrounding the building. The quietness of the architecture combined with the strong presence of nature creates a therapeutic setting. Most spaces for activities or dining have been placed on the Yishun Pond and park side. These rooms have large windows, letting a large amount of natural light into the building. There is also the possibility to ventilate naturally. Users of the buildings can thus enjoy the beautiful outdoor views and have access to the wooden deck. The design of spaces provides individuals with moments for contemplating nature and connecting to their surrounding environment. All the mentioned elements together contribute to creating a healing environment that can contribute positively to the well-being of an individual. The simple and modest design of the building is both a way of providing a tranquil setting for people while simultaneously accommodating a wide range of activities.

Top left: View from the *Broad Way* with the entrance to the event hall on the right, characterized by its pivotable doors. ©Grey Canopy Pte Ltd / AndrewPhuaPhotos

Top right: Study area with classrooms and chat rooms in the background. ©Grey Canopy Pte Ltd / AndrewPhuaPhotos



Bottom left: View from one of the center's cafés with the Yishun pond and park in the background.

©Grey Canopy Pte Ltd / AndrewPhuaPhotos

Bottom right: A building that extends itself horizontally and provides a smooth indoor-outdoor transition.

©Grey Canopy Pte Ltd / AndrewPhuaPhotos

¹⁵⁹ National Parks Board. "Yishun Pond Park". Accessed 16 December 2023. <https://www.nparks.gov.sg/gardens-parks-and-nature/parks-and-nature-reserves/yishun-pond-park>.

View of Yishun Pond at Khoo Teck Puat Hospital in Yishun Central, Singapore, 2019.
©KTPH

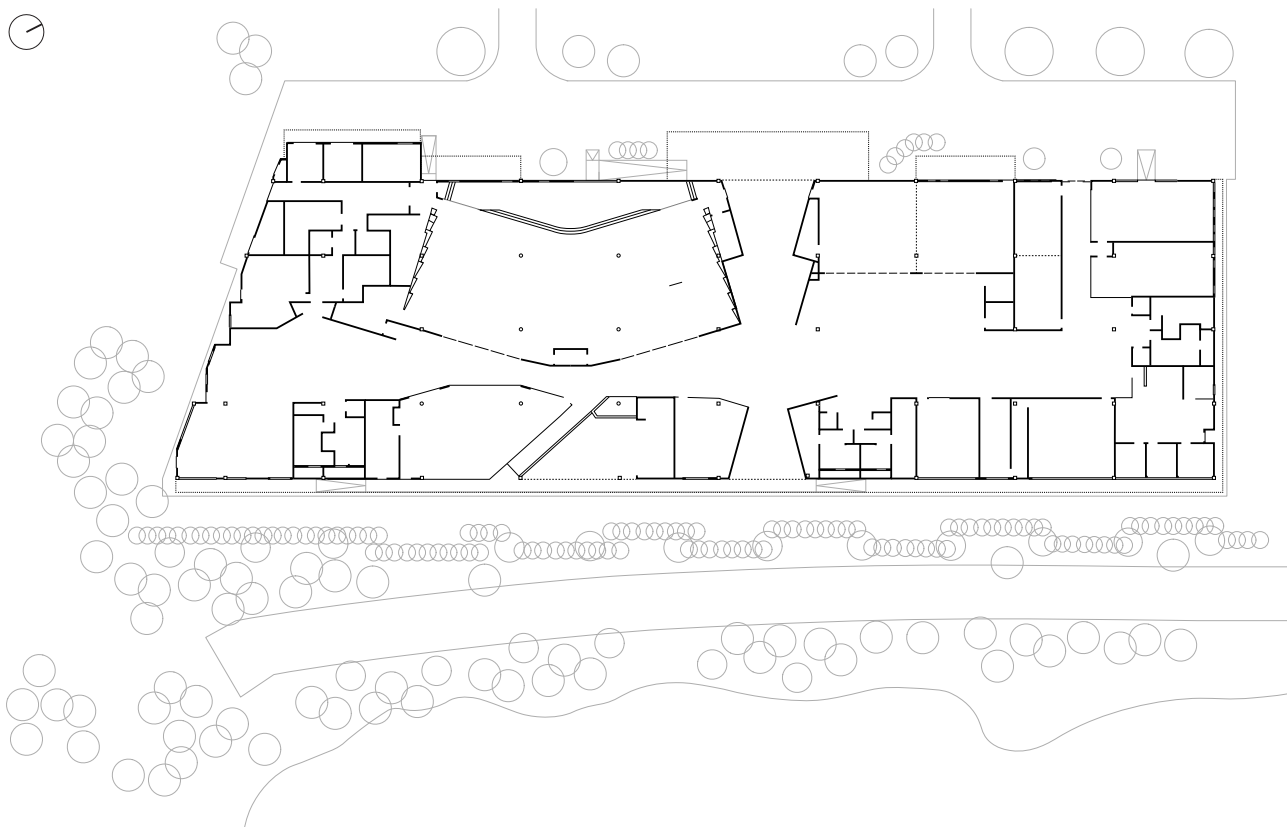
Thanks to its strategic and easily accessible location, the Tzu Chi Humanistic Youth Center provides a safe and laid-back space for young people. Since the site is approximately one kilometer away from several secondary, junior high and high schools, students in the same area can head there without a long commute. This proximity enables schools to organize programs or activities with the center. The facility is also close to the local hospital, being the former hospital polyclinic, which can be fruitful for joint health campaigns, conferences, and workshops.

Mental health and physical health are promoted by the facility on a broader scale through its proximity to the Yishun Pond Park. The entire park area is a natural tranquil haven from the bustling city, which locals frequently go to. Moreover, the park possesses a therapeutic garden, which is used by the community and some outpatients for its restorative effects.¹⁵⁹ The youth center's proximity to schools, residences, the hospital, and a highly frequented public space, such as the Yishun Pond Park certainly make it a building that is well-integrated into the urban fabric. The entrances to the facility have been strategically placed and designed to convey the message of openness, welcoming people of all ages inside. The building's circulation space connecting the main driveway entrance to the promenade, the indoor gallery, can be used by the public as a more direct connection to access the street or the Yishun Pond Park.



The Tzu Chi Humanistic Youth Center is a multifunctional building that offers the community a rich program. There are a vast number of activities organized for young people, which promote the importance of taking care of one's well-being. The center takes a holistic approach in promoting well-being amongst the public. There are spaces for sports, meditation, group activities, discussions, and counseling. Indeed, any young individual seeking help for mental health issues can request counseling and therapy sessions at the center that are free of charge.¹⁶⁰ Since it is an open-minded facility for young people that is highly active in promoting mental, physical, and spiritual health, individuals will most probably feel less stigmatized and ashamed to go seek help there. One can also find spaces for education, workshops, activities, co-working, events, and food there. The Tzu Chi Humanistic Youth Center benefits from its tranquil location in Yishun Central, while not only raising awareness of the importance of overall wellness, but also providing the community with spaces for learning and sharing.

¹⁶⁰ Tzu Chi Singapore. "Youth Wellness". Accessed 15 December 2023. <https://hyc.tzuchi.org.sg/what-we-do/youth-wellness/>.



Level 0 - Plan of the Tzu Chi Humanistic Youth Center.

4.6 Discussion

The examined case studies present different types of psychiatric interventions on the spectrum, ranging from promotion of mental health to continuing care. One can observe different strategies that have been used to integrate these facilities into their urban settings as well as destigmatize these places offering mental healthcare.

1. Spatial Generosity - Horizontality

Many of the presented projects are generous in terms of space and seem to impose themselves horizontally in their urban setting. In the case of the Kitakami Children Health and Support Center, this expansion creates a spacious indoor landscape in an already existing building that was transformed. Indeed, the building which houses the center had a large footprint from the beginning and could offer vast spaces.

In the De Korbeel Child and Youth Psychiatric Hospital, located in the city of Kortrijk, the horizontal extension enables the building to show its presence within the city while having a similar height to the neighboring buildings. In addition, the generous spaces can be divided into indoor and outdoor spaces, offering its users inner courtyards for more private outdoor areas. Patients can use these outdoor spaces or patios as gardens, playgrounds or for sports.

The Tzu Chi Humanistic Youth Center is well-integrated into the Yishun Pond Park through its horizontality. Through its modest architecture and height, it highlights the surrounding presence of nature. The tranquil and natural landscape within the dense urban area makes it a safe and therapeutic haven for people to retreat to.

2. Verticality and Depth

In the case of the Home for Childhood and Adolescence in Geneva, due to the real estate pressure and the choice to build the center on the hospital campus along with other children health facilities, land surface was limited. Thus, to house all wished functions, the building had to extend itself vertically especially. This verticality enables the building to offer a program that follows a gradient of more public spaces on the lower floors to spaces requiring more privacy and less flow of people, the psychiatric inpatient units on the top levels. Moreover, given the proximity of the

mental health center to other city buildings, it was key to give a sense of depth to users. The thick building envelope and the presence of alcoves help in adapting the building to its urban context while providing a comfortable and safe architecture for its users.

3. Transformation of a centrally located building

The following strategy was used in the Kitakami Children Health Center. The building in which the center is integrated is a difficult building to tackle, as it is a large opaque commercial building that possesses several levels of parking space. However, its convenient location and large footprint were key in the success and urban integration of the project.

The Tzu Chi Humanistic Youth Center was also a project that involved the transformation of the former hospital polyclinic, conveniently located near the tranquil Yishun Pond, but still central in the district. This type of medical architecture could seem challenging to work with, especially to transform into a youth community center. However, the architects succeeded in transforming the building into a modest and therapeutic architecture that does not exude the air of a clinic.

4. Accessibility

A more straightforward strategy that can be seen in all case studies is that of a central location within the urban setting that is easily accessible by public transport or soft mobility. This facilitates access and commuting, increasing the likelihood of people visiting the centers.

5. Proximity to schools

In terms of urban location, many of the presented projects destined for young individuals are located near facilities for education. This proximity to schools facilitates access to mental health centers or community centers for children, adolescents, or young adults. It also promotes joint programs with the centers or visits from schools from an early age on. This can have a large impact on how these future generations will consider mental health and handle mental health issues. Through creating safe spaces for the public that promote mental health and normalizing the act of entering these centers, individuals will become more susceptible of seeking help for mental health issues.

6. Public pathway

In some of the case studies, the fact that the public steps onto the facility's outdoor or indoor grounds is a strategy to normalize entering these centers. This is for example the case with the De Korbeel Hospital, where to access the public park, locals use the colorful path crossing the facility's grounds. This path is also a safe playstreet for young patients and an emergency pathway.

Another public pathway can be seen in the Tzu Chi Humanistic Youth Center. Individuals wanting to access the Yishun Pond Park promenade from the street, can directly cross the facility laterally through the galleries. Part of the circulation spaces of the center consequently become a place for public crossing.

7. Direct connection to a highly frequented area

In the Kitakami Children Health and Support Center, the bridge connecting the center directly to the shopping mall is a strategy to facilitate access to the community. Since the adjacent shopping mall is a hotspot for the city, a direct connection between the two buildings is favorable. In addition, the physical presence of a connection between the two facilities declares the clear intention that the public is welcome inside the center.

8. Mixed-use program

Through the presented case studies, it becomes evident that a mixed-use program is an effective strategy to welcome the public inside the facilities and destigmatize the place. Many of the projects offer multifunctional spaces or a flexible architecture that can be adapted for different uses and scenarios. However, there are also spaces like kitchens or cafés that host workshops for the community and do not necessarily only serve the users of the building. For mental health centers with a mixed-use or community program, the act of entering these facilities can be normalized. Moreover, many community functions one can find in these projects are often open to all generations of the community, which creates an inter-generational environment.

9. Fusion of two programs

The Children Day Hospital in Chevilly-Larue is the fusion of a school and day hospital for children. It is a symbiosis of two programs, one for therapy and the other for education, all under one roof. This combination makes it an effective and more direct way for the multidisciplinary team

to understand the development of young patients, collaborate as well as provide them with an adapted care and education. Moreover, the day hospital provides academic support for children who are already schooled during the day. There is also the possibility for patients who are not schooled to use it as their main school. While the day hospital is used by some patients for a few hours every week, it can also be used by others daily for education and therapy.

10. Day and night shift

In the case of mental health centers that possess spaces that are open to the community, a strategy that has been used is to extend the use of these spaces in time. In fact, many spaces for the community are only open during the facility's opening hours and during the night, these are not used. Enabling activities or programs to take place in these spaces during the evening or night extends their time of use serving the community. The Home for Childhood and Adolescence in Geneva has for instance done so with its multifunctional hall, which can serve as sports or event room. During the evenings, when the center is closed (aside from the inpatient levels), theater plays, or other performances can take place in the multi-purpose hall. One could also imagine using the dance or music room during the evenings. Increasing the use of the building through community programs for all ages is a strategic way to establish a strong connection with the community.

The ten strategies that have been used in the different case studies not only involve questions of urban location, but also those of program and mixed-use spaces, time shifts and connections to public areas. Furthermore, in the projects that offer both mental healthcare services and a community program, there are always considerations in organizing spaces for therapy and those for public services or general use. The five case studies also demonstrate different stances in separating community spaces from those for mental health therapy. Finally, they also present different approaches in creating a healing and therapeutic environment for individuals through architecture. Some of the mentioned strategies will be crucial in deciding where to implement the future project for a mental health center for young people in an urban setting. Other strategies will help in deciding what type of mixed-use program this future building should have to serve the community, respond to the current needs and ultimately, break the stigma surrounding mental health.

5

PROPOSED SITE AND BUILDING FUNCTION

5. PROPOSED SITE AND BUILDING FUNCTION



Map showing the city of Sion.

In view of the next phase for this work, solid foundations must be set by defining a program for the future project and carrying out the analysis of the proposed site.

The architectural project will consist of creating a mental health center for children and youth in the heart of Sion, the most populated city of the canton of Valais in Switzerland. According to the Federal Statistical Office, the resident population of Sion was of 35'650 in 2022.¹⁶¹ Furthermore, the Child Rights Institute (IDE) is based in Sion. It is active since many years in raising awareness on children's rights and in implementing the international UN Convention on the Rights of the Child (1989).¹⁶² These do not only include children's rights to education and protection, but also the fundamental right for every child to have access to healthcare services. This naturally includes access to mental healthcare with services or facilities that conform to the standards established by the competent authorities.¹⁶³

¹⁶¹ Office Fédéral de la Statistique (OFS). "Atlas Statistique de la Suisse: Population Résidente Permanente, en 2022". Accessed 21 December 2023. https://www.atlas.bfs.admin.ch/maps/13/fr/17492_72_71_70/27090.html.

¹⁶² United Nations. "Convention on the Rights of the Child." Treaty Series, vol. 1577, Nov. 1989. Accessed December 21, 2023. <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child>.

¹⁶³ United Nations. "Convention on the Rights of the Child." Treaty Series, vol. 1577, Nov. 1989, Article 24. Accessed December 21, 2023. <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child>.

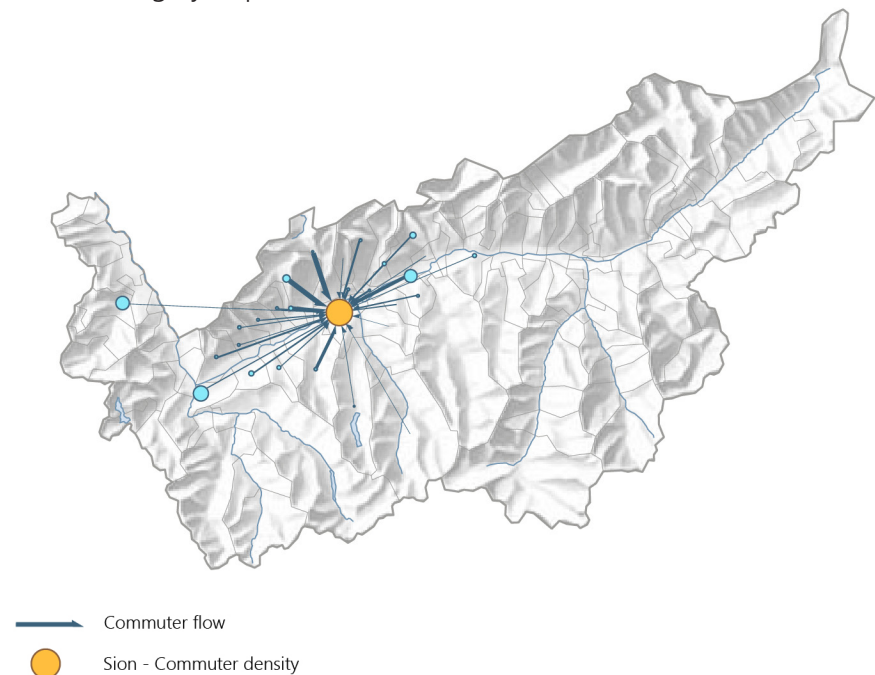
¹⁶⁴ OFS, Section mobilité. "Pendulaires pour des Raisons de Formation". Pendularité (PEND). Accessed 23 December 2023. <https://www.bfs.admin.ch/bfs/fr/home/statistiques/mobilite-transport/transport-personnes/pendularite.html#-135588440>.

¹⁶⁵ OFS and ARE. "Comportement de la Population en Matière de Mobilité: Résultats du Microrecensement Mobilité et Transports 2021". Neuchâtel and Bern, 2023.

It is also important to mention that Sion is a major hub for commuters of all ages from different parts and valleys of the region. For instance, employees and students of the HES-SO Valais and EPFL Valais-Wallis commute daily to Sion since the campuses and research facilities are based there. The following map of the canton of Valais shows the flow of daily commuters to the city of Sion, a central hub in the region. Individuals commute to Sion for work or education especially, by car, train, or road public transport mostly. In 2021, around 0.7 million people in Switzerland, aged 15 or older, traveled daily for education. These were mostly students going to school or university. More than half of this age category used the train or the road public transport to get to their school grounds. They traveled on average 20 kilometers to arrive at their destination.¹⁶⁴ Data from the Federal Statistical Office indicate that young adults aged between 18 to 24 years old were the most mobile in 2021 across the country with on average 40.2 kilometers traveled in a day. Moreover, individuals aged 25 to 64 years old traveled approximately 34.7 kilometers in a day.¹⁶⁵ Many commuters that travel to Sion come from the areas of Monthey, Martigny and Sierre. There is also a significant number of individuals who commute down to Sion daily from the more hilly or mountainous areas around the city. This is essentially because the city is a true hub for work and education. Indeed, in some municipalities located at a higher altitude, education offers are limited as well as jobs, which can also sometimes be highly dependent on seasons.

Map showing daily commutes to the city of Sion from different areas in Valais (within a 35 km radius).

Based on the following map: "Principaux flux de pendulaires entre les communes, en 2018". ©OFS (2021)



Through the research conducted on mental health facilities in Switzerland and an interview with Dr. Puglia who has previously worked in Valais, it became evident that there is a clear need for psychiatric structures specifically for children and youth in the canton. Compared to Geneva, there are a limited number of psychiatric facilities in the valley, psychiatrists and other employees working in the mental healthcare field, so patient overflows are a reality.¹⁶⁶ Moreover, mental healthcare facilities specifically for children and youth are scarce.

The reports on the mental health situation of the population indicated that there was a significant increase in mental health issues among young people in the last few years. The Swiss Confederation is also pursuing its public health strategy for the country with a forward-looking vision. Some measures include promoting mental health, breaking the stigma surrounding the subject, improving prevention, and increasing the identification of mental health illnesses in their earlier stages.¹⁶⁷ It is often during childhood and adolescence that mental health issues can arise and persist as one gets older, especially if not identified and treated earlier. Thus, increasing the offer of mental healthcare for younger generations and making these services easily accessible for them will help the situation we are facing. In fact, after the COVID pandemic at the Sion Hospital, there were an increasing number of young patients with mental health issues admitted and not enough space, so a new pilot project was created to adapt to this distress. The temporary project consisted of creating eight additional workplaces in Sion, Martigny and Brig to strengthen outpatient psychiatric care for young people within the canton.¹⁶⁸ The Valais Hospital then opened a psychiatric outpatient center for around 40 individuals aged 12 to 18 at the end of 2022, named CAP'Ado. It is in the former Ophthalmology Research Institute, close to the Sion Hospital and is meant to serve the Sierre-Sion sector.¹⁶⁹

With all the previous considerations and current needs in mind, it would be beneficial for Sion to possess an easily accessible mental health center for young people in the heart of the city. It would not only provide outpatient psychiatric care to children and youth, but also intermediate care. This newly proposed mental health center following this theoretical statement will also integrate a mixed-use program. The building could work in symbiosis with other nearby community facilities and synergies could be formed. As seen in the previous case studies, this would enable young individuals to become aware of mental health, seek help in times

¹⁶⁶ Appendix 4, Interview with Dr. Jalilla Puglia, 130.

¹⁶⁷ Bundesamt für Gesundheit (BAG). "Psychische Gesundheit und Psychiatrische Versorgung: Politische Aufträge des Bundes". Accessed 21 December 2023. <https://www.bag.admin.ch/bag/fr/home/strategie-und-politik/politische-auftraege-und-aktionsplaene/politische-auftraege-im-bereich-psychische-gesundheit.html>.

¹⁶⁸ Appendix 4, Interview with Dr. Jalilla Puglia, 130.

¹⁶⁹ Hôpital du Valais. "Avec CAP'Ado l'Hôpital du Valais renforce le Soutien Psychiatrique destiné aux Adolescents", 22 November 2022. https://www.hopitalduvalais.ch/lhopital-du-valais/actualites/en-detail?tx_news_pi1%5Baction%5D=-detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=2536&-cHash=014ec919226d6d55f505fa0f3d55af00.

of need, while using the facility or its grounds for other activities. The building would cover a wide range in the psychiatric intervention spectrum, such as offering psychiatric treatment to outpatients and providing continuing care for patients at the day hospital. The facility would also be engaged in promotion and prevention. One of the main goals is to destigmatize mental health from a young age on and this includes destigmatizing the place where psychiatric care is offered. A strategic location for the new mental health center within the city of Sion will certainly have an impact on its future use and perception by the community. Commuters from different parts of the canton will be able to easily access the building via public transport. Architectural considerations will be made in the next phase to facilitate taking the first step in seeking help for mental health issues and creating a therapeutic environment.

SITE ANALYSIS

The site for the project's implementation is located on the southern side of the Sion train station, in the Ronquoz district. This entire industrial area will be under transformation in the next 30 years. The envisioned urban development follows the Ronquoz 21 masterplan, won by Herzog & de Meuron and Michel Desvigne Paysagiste in 2019. This entire area of 60 hectares will be transformed into a mixed-use urban area with housing, education, offices, shops, recreational facilities, and green spaces.¹⁷⁰ The masterplan proposes a central spine with green spaces that extends from east to west and a chain of parks growing outwards, contributing to creating a healthier and more permeable city. Improving public transport connectivity and pathways for soft mobility are also part of the masterplan.

The first park is currently under construction at the east entrance of the district, by the former converted slaughterhouses and near the bridge crossing the Rhône. Moreover, OIKEN, a major distributor of energy in Valais, currently has its headquarter in the same area. It is also taking part in the first stage of transforming a sector of the Ronquoz district through an architectural project. The project involves the creation of a new administrative headquarter, which will include an electrical substation, offices, a parking garage, and housing.¹⁷¹ Since the Ronquoz 21 masterplan is on a 30 year or more planning horizon, the new mental health center for young people will be in a sector that will undergo transformations in the next few years.

¹⁷⁰ Herzog & de Meuron. "519 Ronquoz 21". Accessed 22 December 2023. <https://www.herzogdemeuron.com/projects/519-ronquoz-21/>.

¹⁷¹ MEMENTO ARCHITECTURE. "Concours de Projets d'architecture OIKEN - 1er Rang 1ère Mention". Accessed 22 December 2023. <https://www.memento-arch.ch/17-projet>.

The location of the project has also been considered so that the city of Sion can benefit from this psychiatric facility for young people as soon as possible, on a short-term horizon (next five to ten years). In addition, it would provide the Ronquoz 21 district with a public mental health facility. In fact, the psychiatric facilities for Sion are located at the far east edge of the city, at the Sion Hospital. Medical practices can mostly be found on the north side of the Sion train station.

Public park

The Sion mental health center for children and youth will be located at the Rhône Plaza, on the edge of the park that is currently being constructed on the east side of the Ronquoz district. This is a strategic location since the users of the buildings will be able to benefit from a more natural and spacious setting within the city. They will thus be able to enjoy the outdoor public space and its planned recreational or sports facilities.

Community program promoting synergies

Synergies could be created with the adjacent building, “L’archipel”, also located in the park. The former slaughterhouses were recently converted into this new center, which has been opening gradually since May 2023. The building houses a community program, promoting circular and local economy as well as social connections. L’archipel possesses spaces for coworking, workshops, courses, conferences, and events. There is also a material resource center, where one can acquire secondhand materials and a “library of things”, where the community can share objects and equipment instead of buying them. A restaurant-bar with a spacious terrace and gardening spaces for the center are planned. The center also has plans to collaborate with the Energypolis campus close by, comprising of the HES-SO Valais and EPFL Valais-Wallis.¹⁷²

¹⁷² SION. “Le site historique des anciens abattoirs de Sion se transforme en centre de compétences pour l’économie circulaire”. Accessed 26 December 2023. <https://www.sion.ch/communiqués/1835596>.

Accessibility and mobility

In terms of accessibility, the mental health center will benefit from its proximity to the train station, which is located 450 meters away. The facility will be easily accessible for young Sion citizens as well as commuters. The site is also favorable in terms of other public transport connections and soft mobility.



Map showing the Sion Ronquoz 21 district in its current state.



View of the east side of the city of Sion and the Ronquoz district, located between the train station and the Rhône.
©Anja IIs

The city of Sion is planning a new cable transport system between the train station (southern plaza), located at 500 meters altitude and the Mayens-de-l'Hôpital, at 1400 meters altitude. This would provide an efficient connection between the city and the mountains for commuters. Mayens-de-l'Hôpital will also become the middle station between the city of Sion and the ski station Thyon 2000.¹⁷³

¹⁷³ SION. "Liaison Câblée Plaine - Montagne". Accessed 26 December 2023. <https://www.sion.ch/ron-quo21/14924>.

Proximity to schools

Since the new mental health center will be destined to older children and youth (adolescents and young adults), it has also been placed close to education facilities for these age categories. It will benefit from its proximity to the new high school that is currently being built at the Cours Roger-Bonvin. The school is located 350 meters away from the site, across the Rhône and will welcome 1350 students from 2025 on.¹⁷⁴ As previously mentioned, the Energypolis campus (HES-SO Valais and EPFL Valais-Wallis) is also close to the site, around 250 meters away. Aside from creating more easily accessible mental healthcare services for these age categories, one could also imagine the mental health center collaborating with these schools. This will be especially fruitful for promoting mental health and doing prevention campaigns among students.

¹⁷⁴ espazium. "Construction d'un Nouveau Collège à Sion". Accessed 26 December 2023. <https://competitions.espazium.ch/de/wettbewerbe/decisi/construction-d-un-nouveau-college-sion>.



Distance from potential site to schools and the train station with the corresponding radiuses:

..... R_1 = 250 meters

..... R_2 = 350 meters

..... R_3 = 450 meters

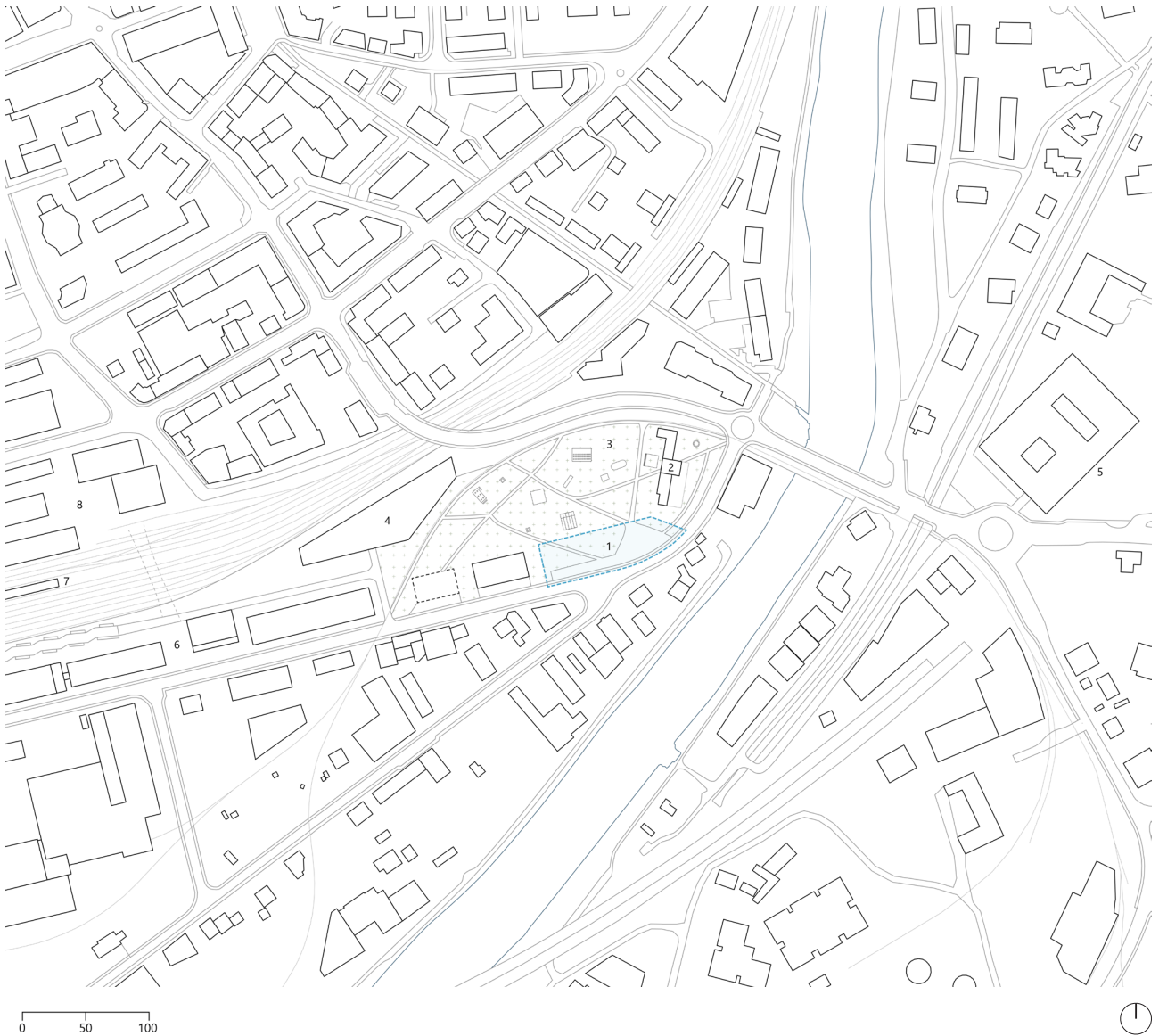


— Railway
 — Public transport - bus lines
 — Soft mobility

— Cable transport
 — Highway

Diagram with different means of transport to access potential site.

All in all, the site for the new mental health center for children and youth favors the destigmatization surrounding mental health and the facility itself. As a matter of fact, the center will be in an urban setting that gives it not only significant public visibility, facilitates its access, promotes synergies, but also engages the community.



- 1 Potential site for project
- 2 L'archipel - community program
- 3 Park with outdoor facilities (e.g. outdoor cinema, playground, stage and gym)
- 4 Parking (cf. Ronquoz 21 HdM masterplan)
- 5 High school by the Cours Roger Bonvin - ongoing construction work
- 6 Energypolis - EPFL Valais-Wallis & HES-SO Valais
- 7 CFF Sion train station
- 8 Cour de Gare - ongoing construction work

6

CONCLUSION

6. CONCLUSION

Through research and the analysis of case studies, we discussed the challenges and identified different approaches as well as strategies that could help in creating a mental health center that is well integrated in its urban context. Moreover, the findings and interviews conducted with specialists helped in identifying the current needs for mental healthcare specifically for young people in Switzerland.

While the topic of this theoretical statement covers the challenges and perspectives in creating a mental health facility in an urban setting, a central location alone does not necessarily imply its full integration, nor does it destigmatize mental health and the building. It is necessary to consider the many other factors, which combined, take part in breaking the stigma. On one hand, there are social, political, and economical factors as well as decisions that can contribute to promoting mental health among the population. On the other hand, there are also more punctual factors that can influence this. These not only include facilitated access to a mental health center for the targeted age categories, but also an inviting and healing architecture combined with spaces for therapy. Spaces should be designed to provide comfort and give possibilities for retreat or social interaction. Another crucial factor is the program of the center and its mixed-use. Multifunctionality shows great potential in normalizing entering the facility or its grounds for other purposes from a young age on. It allows the city to benefit from mental healthcare services and other community activities.

Ideally, a mental health center in the 21st century would follow a more holistic approach. It would not only respond to the current needs in terms of psychiatric treatment and mental health support, but also be active in other realms such as sports, leisure, education, and the promotion of mental health. If under the roof of such a center, we can also teach future generations about the importance of mental health and why it is not shameful to seek help when we need it, perhaps we could truly have a lasting impact on their lives for the better.

7

APPENDIX

For confidential reasons, the following interviews and correspondence have not been included in the appendix :

7.1 INTERVIEW with Dr. Flavio Ungarelli	120-123
7.2 CORRESPONDENCE with Claudio Peter (OBSAN)	124
7.4 INTERVIEW with Dr. Jalilla Puglia	130-132

7.3 INTERVIEW and MEA VISIT with Patrick Longchamp (CLR architectes)

An important part in the MEA's urban insertion was to align the mental health facility with the neighboring primary school (La Roseraie), connecting it not only with the neighborhood, but also the school. The school is, after all, the symbol of age and it won't only be this school which might come into the building. In the intermediate parts of the façade between the windows for instance (pilaster), there is sand finish concrete. If one looks closer, there are small, incrustated stones with the same color as the gable of the adjacent school. The reception desk and cafeteria service table inside the MEA have been designed with the same relief pattern as the mineral pilaster elements on the façade. The windows also vary in color if one looks closely at them. In fact, different tinted glasses were chosen for the windows, creating a varying façade. To integrate the building's façade to the neighborhood (buildings with housing and primary school), it also comprises of smooth mineral elements, which frame and highlight every floor. In terms of tonality of the façade, there was a clear intention to match the buildings of the neighborhood.

Ground floor:

CLR architectes proposed an alcove in the shape of a house by the entrance cafeteria, to signal to people coming into the building that it is a facility linked to childhood. In the project, a challenge was finding an equilibrium in the design since it is also a hospital. Some of the furniture in the facility comes from the HUG as well as the university. However, there is also more colorful furniture, which is made from recycled fish nets.

Philosophy of the project:

- Connection and strong link to the city of Geneva
- A mental health facility of 16'000 m² that regroups all the different services that were spread across the city (11 different units are now regrouped into this building)
- Ground floor with 4 meters height. It is an intriguing floor since it mixes community spaces with the mental healthcare realm.

The chimeras incrustated in the ground floor's terrazzo contribute to the intriguing side of the building as well, especially for children who can

discover the various creatures present on the ground floor. One of the playful projects is linked to Trip Trap, implicated in escape games in Switzerland. The other project is called "Symbiotopia", a created universe, linked to the chimeras incrustated in the floor and part of a game.

The program of the ground floor was for the most part proposed in the specifications of the competition at the beginning of the project. However, for the CinéMEA, it was originally meant to be an auditorium, where movies could also be projected. In the end, the architects proposed the opposite and the cinema was built instead.

During the day, the Bioscope exhibition and workshop space is open, and schools can come visit. The goal of François Ansermet, who initiated the concept of the MEA, was that children would get to know this building before having to need it for mental healthcare services. This is truly in view of destigmatizing mental health from a young age one and the building itself. Architecturally speaking, it was important for the MEA to be integrated into the neighborhood.

For the outdoor spaces, CLR architectes collaborated with a landscape architect named Pascal Heyraud for the competition of the MEA. Trees will soon be planted in the garden.

The ground floor is more of a public space. The Bioscope invites schools to come and visit, while there are also classrooms for young doctors and students in psychology or psychiatry. Moreover, there is a multifunctional room as well as a music and dance room. The multifunctional room is a gym hall, but it can also be configured into a performance hall for theater plays for instance. People can access the space from the top of the hall. Mobile bleachers can be stretched out to offer seats for the audience. They will do future collaborations for theater performances as well as music or dance related performances (e.g. Antigone).

The opening hours of the building are flexible and adapt to the planned-out activities and performances. Some theater plays are planned in the coming weeks and in these cases for instance, the building will be open after its official opening hours.

On the ground floor, there is a room for the surveillance personnel. The ground floor and its architectural elements like the walls are also used as

canvases for digital exhibitions. They have ongoing digital art projects, which will be displayed there.

There are two entrances on the ground floor. The main entrance is on the same side as the one from the adjacent school, facing the street. The secondary entrance is oriented towards the HUG hospital and mostly used by staff. The ground floor with its more public program was designed so that there is a real connection between the city and the mental health facility.

The building is organized in the following manner:

Basement and ground floor: Public program

1st floor: Three day clinics for children with a shared terrace

2nd floor to 4th floor: Different outpatient units (and prevention sector)

5th and 6th floor: Hospitalization units

A palette of colors evolves as one walks up or down the staircases. The change of floor materials used on the ground floor versus the upper floors also enables people to know when they have reached the ground floor in order to leave the building.

Therapeutic spaces like the day clinic for young children possess door handles placed at a higher height on the glass doors separating the corridors so that children cannot open them and wander off on their own. Wooden parquet was used throughout the building (except the ground floor and basement). The goal was to give a feeling through the pattern and size that one is at a smaller scale. The parquet was installed by the two same people in the entire building. With angle changes, the parquet with its specific pattern helps to complexify the spaces, aside from giving a more homely and calming atmosphere.

Rooms or offices possess a wooden horizontal element by the window (in the depth of the wall), which users can use their own way (to sit, to store books or toys etc.). Every office or room has a wooden door with an adjacent vertical window. This raises a few questions for psychiatrists or psychotherapists concerning privacy, since anyone walking in the corridor can see who is currently in the room. Some units are now looking into perhaps integrating a system which blurs the window with an on/off system. While some users of the building have glued films onto the window,

some others have stuck drawings and postcards, giving corridors a more homely feel. For walls, the architects purposefully did not put picture railings (cyms) so that the corridors are not directly associated with administrative spaces.

Since the plan is elaborated in a non-symmetrical way, every floor has different parts and there is variety. This includes spaces like the end of hallways which offer views towards the outside. They also vary position and size from floor to floor. In the plan, the corridors have been reversed on each level so when one walks in the building, one really has the impression of having different views. The architects wanted to avoid the notion of superposition. The kitchen and eating space on the 4th floor is located at the corner of the building with a view on the school's playground, by the gable wall of the primary school. However, this proximity does not cause problems given the function of the space.

There is a contrast between the distribution cores of the building with staircases and elevators, which are in visible concrete, and the corridors, floors, door, and window frames, which are made of wood. It was voluntary to keep all static cores in concrete. The rest of the structure is composed of pillars. Hallways, offices, and patient rooms have white walls with parquet as flooring. This combination creates a calm atmosphere. In some special rooms, colors have been used. This is for example the case for the waiting rooms, which have a reddish tone. There are also tones of blue and green in different special rooms of the building. The architects also wanted that from the outside, the building reflects a certain complexity with the different colors used in the spaces, similarly to what can be observed in housing. Moreover, the building uses a circadian lighting system. All the shades are automatic and the lighting in the building varies during the day, adapting to the daylight.

On the first floor, there are three day clinics and they share the same terrace. In the day clinic, which offers care for very young children, parents usually come in with their children at 10 AM and stay until 3 PM. During the day, meals are shared together. There are consultations with a child psychiatrist or psychologist. Psychomotor therapy is also offered for children in the presence of their parents. There is a possibility for parents to rest and spend some time alone in attributed rooms. Often parents who do not possess a bath at home can use the large bathtub space on this floor. The day clinics' shared terrace is their own outdoor space, where

children can play together. There was a question raised by the personnel from the day clinics about whether to separate this space a little since the older children on rolling toys could run into the younger ones playing on the ground.

At the beginning of the project, during the competition phase, the building was proposed with a large terrace on the school side. It was, however, not possible to do so without fencing it completely. Instead of creating this terrace, the architects opted for smaller loggias throughout the building (on the 4th, 5th and 6th floor) as well as the spacious terrace on the first floor.

In addition to the break rooms or coffee corners on each floor, there is a pleasant common break room on the fourth floor, which the entire personnel of the building shares. It is a nice opportunity for the personnel to have coffee with colleagues from other floors.

For certain psychotic patients on the upper levels, the void can be a little unsettling. That is why the architects proposed a building with an adapted thickness, creating alcoves with the shelf or bench by the window as well as giving more depth and sense of security to its users.

Windows have been designed with security measures. On each floor they can be opened but block at 10 centimeters. On the two top floors of the building (hospitalization units), the windows also block at 10 centimeters and additional grids have been placed in front in case young patients manage to break the locking system.

8

BIBLIOGRAPHY

BOOKS

Architecture Research Foundation (ARQ). *Architecture as Medicine – The Importance of Architecture for Treatment Outcomes in Psychiatry*. Edited by From Lena and Stefan Lundin. Translated by Roger Tanner. Uppsala: ARQ – the Architecture Research Foundation, 2020. ISBN 978-91-978215-1-3.

Baker, A., R. Llewelyn Davies, and P. Sivadon. *Services Psychiatriques et Architecture*. Palais des Nations - Genève: Organisation Mondiale de la Santé, 1960.

Browning, William, Catherine Ryan, and Joseph Clancy. *14 Patterns of Biophilic Design*. New York: Terrapin Bright Green llc., 2014.

Bubien, Yann, and Cécile Jaglin-Grimonprez. *ARCHITECTURE POUR LA PSYCHIATRIE DE DEMAIN*. Rennes: Presses de l'EHESP, 2017. ISBN 978-2-8109-0560-7.

Commission indépendante d'experts (CIE). *Visages de l'Internement Administratif: Portraits de Personnes Concernées*. Vol. 1. Neuchâtel: Éditions Alphil, 2019. ISBN 978-2-88930-253-6.

Despland, Jean-Nicolas, and Sylvie Berney. *Psychiatre et Psychothérapeute ? Petite Histoire Suisse*. John Libbey Eurotext. Vol. 88. L'Information Psychiatrique, 2012.

Donzé, Pierre-Yves. *Bâtir, Gérer, Soigner – Histoire des Établissements Hospitaliers de Suisse Romande*. Geneva: Georg Editeur, 2003. ISBN 2-8257-0829-1.

Edward, Karen-leigh, and Chris Alderman. *Psychopharmacology: Practice and Contexts*. Oxford University Press, 2013. ISBN 978-0195519631.

Foucault, Michel. *Histoire de La Folie à l'Âge Classique*. Paris: Gallimard, 1972.

Garibian, Taline, Jean-Michel Henny, François Ansermet, Olivier Halfon, and Philippe Nendaz. *75 Ans de Pédiopsychiatrie à Lausanne*. Lausanne: Éditions BHMS, 2015. ISBN 978-2-940527-01-4.

Institute of Medicine (US) Committee on Prevention of Mental Disorders. *Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research*. Edited by Patricia J. Mrazek and Robert J. Haggerty. Washington DC: National Academies Press, 1994.

Kellert, Stephen R., and Elizabeth F. Calabrese, *The Practice of Biophilic Design*, 2015. www.biophilic-design.com

Kellert, Stephen R., Judith H. Heerwagen, and Martin L. Mador. *Biophilic Design: The Theory, Science, and Practice of bringing Buildings to Life*. John Wiley&Sons, Inc. Hoboken, New Jersey, 2008. ISBN 978-0-470-16334-4.

Malkin, Jain. *A Visual Reference for Evidence-Based Design*. 1st ed. Center for Health Design (CHD), 2008. ISBN 978-0-9743763-6-3.

Meier, Marietta. *Der "Fall Hägi" am Zürcher Burghölzli: Zur Reaktion von Psychiatrie und Behörden auf Kritik an Staatlichen Anstalten*. University of Zürich, 2006.

Yanni, Carla. *The Architecture of Madness: Insane Asylums in the United States*. Minneapolis: University of Minnesota Press, 2007. ISBN 978-0-8166-5435-2.

JOURNAL ARTICLES

Akuneho, Jaja Thaddeus, and Imaah Napoleon. "Healing Architecture in Hospital Designs." *Global Scientific Journals* 9, no. 6 (June 2021). ISSN 2320-9186.

Berger, Gregor, Isabelle Häberling, Alana Lustenberger, Fabian Probst, Maurizia Franscini, Dagmar Pauli, and Susanne Walitza. "The Mental Distress of our Youth in the Context of the COVID-19 Pandemic." *Swiss Medical Weekly* 152 (February 23, 2022). <https://doi.org/10.4414/SMW.2022.w30142>. CC BY-NC-SA 4.0

Bert, Fabrizio, Maria Rosaria Gualano, Elisa Camussi, Giulio Pieve, and Gianluca Voglino. "Animal Assisted Intervention: A Systematic Review of Benefits and Risks." *European Journal of Integrative Medicine* 8, no. 5 (October 2016): 695–706. <http://dx.doi.org/10.1016/j.eujim.2016.05.005>.

Bissegger, Paul. "Review of Lieux de Folie : Monuments de Raison. Architecture et Psychiatrie En Suisse Romande, 1830-1930 (Fussinger, Tevaearai)." *Traverse : Zeitschrift für Geschichte* 7, no. 2 (2000): 170–71.

- DuBose, Jennifer, Lorissa MacAllister, and Khatereh Hadi. "Exploring the Concept of Healing Spaces." *Health Environments Research & Design Journal* 11, no. 1 (2018): 43–56. <https://doi.org/10.1177/1937586716680567>.
- Fussinger, Catherine, Germann Urs, and Martin Lengwiler. "Ausdifferenzierung Der Psychiatrie in Der Schweiz : Stand Und Perspektive Der Psychiatriehistorischen Forschung." *Traverse : Zeitschrift Für Geschichte* 10, no. 1 (2003). <https://doi.org/10.5169/seals-23614>.
- Gruebner, Oliver, Michael A. Rapp, Mazda Adli, Ulrike Kluge, Sandro Galea, and Andreas Heinz. "Cities and Mental Health." *Deutsches Ärzteblatt International* 114 (2017): 121–27.
- Jäger, Matthias. "Traitement à Domicile – Intervention de Crise Psychiatrique." *Bulletin des Médecins Suisses* 104, no. 10 (March 8, 2023): 75–76.
- Kilicel, Deniz, Franco De Crescenzo, Remy Barbe, Anne Edan, Logos Curtis, Swaran Singh, Jean-Michel Aubry, et al. Review of Mapping Child and Adolescent Mental Health Services and the Interface During Transition to Adult Services in Six Swiss Cantons, by Heloise Young and Giovanni De Girolamo. Edited by Alexis Revet. *Front Psychiatry* 13, no. 814147 (May 9, 2022). <https://doi.org/doi:10.3389/fpsyt.2022.814147>.
- Kurt, Hans, Undine E. Lang, and Franziska Rabenschlag. "Aktuelle Psychiatrische Versorgung in der Schweiz." *NeuroTransmitter* 27, no. 4 (April 2016): 16–21. <https://doi.org/10.1007/s15016-016-5516-5>.
- Morsier, Georges de. "Histoire de La Psychiatrie et de La Neurologie à Genève." *Gesnerus : Swiss Journal of the History of Medicine and Sciences* 34 (1977): 186–198. <https://doi.org/10.5169/seals-521007>.
- P. Fricke, Oliver, Alfred Längler, David D. Martin, and Daniel Halswick. "Healing Architecture for Sick Kids: Concepts of Environmental and Architectural Factors in Child and Adolescent Psychiatry." *Hogrefe*, 2019, 27–33. <https://doi.org/10.1024/1422-4917/a000635>.
- Rainey, Reuben M. "Design for Healing: The Transformation of Health-Care Facilities in the United States." *SiteLINES: A Journal of Place* 15, no. 1 (Fall 2019): 3–5.
- Saudan, Guy. "La Faculté de Médecine de l'Université de Lausanne (1890): Un Pari Politique." *Gesnerus: Swiss Journal of the History of Medicine and Sciences* 48, no. 3–4 (1991).

- Springer Nature Limited. "End the Neglect of Young People's Mental Health." *Nature: The International Journal of Science* 598 (October 14, 2021): 235–36.
- Stein, Dan J., Steven J. Shoptaw, Daniel V. Vigo, Crick Lund, Jason Bantjes, Norman Sartorius, and Mario Maj. "Psychiatric Diagnosis and Treatment in the 21st Century: Paradigm Shifts versus Incremental Integration." *World Psychiatry* 21, no. 3 (October 2022): 393–414. <https://doi.org/doi: 10.1002/wps.20998>.
- Szofran, Janet, and Susan Meyer. "Horticultural Therapy in a Mental Health Day Program." *Journal of Therapeutic Horticulture* 15 (2004): 33–34.
- Thoits, Peggy A. "Resisting the Stigma of Mental Illness." *American Sociological Association* 74, no. 1 (March 2011): 6–28.
- Thornicroft, Graham, Tanya Deb, and Claire Henderson. "Community Mental Health Care Worldwide: Current Status and Further Developments." *World Psychiatry* 15, no. 3 (October 2016): 276–86. <https://doi.org/10.1002/wps.20349>.
- Tillmann, Suzanne, Danielle Tobin, Jason Gilliland, and William Avison. "Mental Health Benefits of Interactions with Nature in Children and Teenagers." *BMJ*, no. 10 (October 2018): 958–966. <https://doi.org/10.1136/jech-2018-210436>.
- Tini, Elvira. "Zukunft der Kinder- und Jugendpsychiatrie." *Schweizer Zeitschrift Für Psychiatrie & Neurologie* 02/2022 PSYCHIATRIE+NEUROLOGIE (April 22, 2022): 18–22.
- Ulrich, Roger S. "Effects of Healthcare Environmental Design on Medical Outcomes." *Journal of Health Care Interior Design* 3 (1991): 97–109.
- Walser, Hans H. "Schweizer Psychiatrie Im 19. Jahrhundert." *Gesnerus: Swiss Journal of the History of Medicine and Sciences* 29 (1972): 183–95.
- Ziegler, Ute. "Multi-Sensory Design as a Health Resource: Customizable, Individualized, and Stress-Regulating Spaces." *Design Issues* 31, no. 1 (Winter 2015): 53–62. https://doi.org/10.1162/DESI_a_00309.

STUDIES / REPORTS / CONVENTION

Barrense-Dias, Yara, Lorraine Chok, and Joan-Carles Surís. "A Picture of the Mental Health of Adolescents in Switzerland and Liechtenstein." *Raisons de Santé* 323. Lausanne: Centre universitaire de médecine générale et santé publique (Unisanté), November 2021. <https://doi.org/10.16908/issn.1660-7104/323>.

Brock Chisholm. "Outline for a Study Group on World Health and the Survival of the Human Race". Geneva: World Health Organization (WHO), 1954.

Bundesamt für Gesundheit (BAG). "Kennzahlen der Schweizer Spitäler 2021." Bern: Schweizerisches Gesundheitsobservatorium (OBSAN), March 2023.

Claudio, Peter, Alexander Tuch, and Daniela Schuler. "Psychische Gesundheit – Erhebung Herbst 2022. Wie Geht es der Bevölkerung in der Schweiz? Sucht sie sich bei Psychischen Problemen Hilfe?" Obsan Bericht 03/2023. Neuchâtel: Schweizerisches Gesundheitsobservatorium (OBSAN), 2023.

Co'burn, Hayden. "The Architecture of Mental Health: Understanding Approaches to Mental Health + Care in the Urban Environment." Sydney: NSW Architects Registration Board, 2021. <https://www.architects.nsw.gov.au/public-resources/byera-hadley-traveling-scholarships1/33-past-reports/586-the-architecture-of-mental-health>.

Confédération Suisse. "Avenir de la Psychiatrie en Suisse: Rapport en Réponse au Postulat de Philipp Stähelin (10.3255)," March 11, 2016. Jäggi, Jolanda, Dr. Lena Liechti, Kilian Künzi, and Bureau BASS. "L'influence de La Pandémie de COVID-19 Sur La Santé Psychique En Suisse." Berne, November 25, 2022.

Kuhl, Hans Christian. "Stationäre Psychiatrie in der Schweiz 2000–2006." Arbeitsdokument 31. Neuchâtel: Schweizerisches Gesundheitsobservatorium (OBSAN), November 2008.

Office Fédéral de la Statistique (OFS). "Enquête Suisse sur la Santé 2022: Vue d'ensemble." 14 Santé. Neuchâtel, 2023.

Office Fédéral de la Statistique (OFS). "Traitements pour Troubles Psychiques chez les Jeunes En 2020 et 2021." 14 Santé. Neuchâtel, December 2022.

Office Fédéral de la Statistique (OFS), and Office Fédéral du Développement Territorial (ARE). "Comportement de la Population en Matière de Mobilité: Résultats du Microrecensement Mobilité et Transports 2021." Neuchâtel, 2023.

Schuler, Daniela, Alexander Tuch, Isabelle Sturny, Claudio Peter, and Obsan. "Santé Psychique: Chiffres Clés et Impact du COVID-19." Bulletin. Neuchâtel: Observatoire Suisse de la Santé (OBSAN), February 2022.

World Health Organization. "World mental health report: transforming mental health for all." Geneva: World Health Organization, 2022. Licence: CC BY-NC-SA 3.0 IGO.

Wyl, Agnes von, Erica Chew Howard, Laura Wade-Bohleber, Silvia Passalacqua, Larissa Schneebeli, Patrick Haemmerle, and Andreas Andreae. "Stationäre und tagesklinische Angebote der psychiatrischen Gesundheitsversorgung an der Schnittstelle des Jugend und Erwachsenenalters in der Schweiz : eine Bestandesaufnahme bestehender Angebote im Auftrag des BAG." Zürich: Zürich University of Applied Sciences (ZHAW), 2020.

Wyss, Letizia, and Karin Keller. "Versorgungspfade in der Psychiatrisch-Psychotherapeutischen Versorgung von Kindern und Jugendlichen." Bern: Federal Office of Public Health (FOPH), 2020.

United Nations. "Convention on the Rights of the Child." Treaty Series, vol. 1577, Nov. 1989. Accessed December 21, 2023. <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child>.

VIDEO RECORDINGS

AIANY Design for Health Committee, *The Architecture of Mental Health* (05.03.2022). <https://www.centerforarchitecture.org/video/the-architecture-of-mental-health/>. Accessed 23 September 2023.

White Arkitekter, *Destigmatizing Mental Health through Architecture* (02.03.2021). <https://www.youtube.com/watch?v=eZHB3yw80A4>. Accessed 21 September 2023.

WEB PAGES

Abrahams, Tim. "VK's De Korbeel Youth Hospital opens out to the Community." Accessed December 2, 2023. <https://www.architectural-record.com/articles/16345-vks-de-korbeel-youth-hospital-opens-out-to-the-community>.

AETC. "Une Pièce de Nature au service des Enfants." Accessed October 22, 2023. <https://www.aetc.ch/fhel/>.

Bachmann, Christian. "Zwangsjacken, Schockkuren, Stromstöße und Psychopharmaka." Accessed 26 October, 2023. <https://www.srf.ch/wissen/mensch/mensch-zwangsjacken-schockkuren-stromstoesse-und-psychopharmaka>.

Bibliothèque de Genève. "Hôpital de Psychiatrie de Belle-Idée, aujourd'hui intégré à la Clinique de Belle-Idée." Accessed October 29, 2023. <https://bge-geneve.ch/iconographie/personne/hopital-de-psychiatrie-de-belle-idee-aujourd'hui-integre-la-clinique-de-belle-idee>.

Buddhist Tzu Chi Charity Foundation. "Our Founder." Accessed December 15, 2023. https://global.tzuchi.org/about-us_our-founder.

Bundesamt für Gesundheit (BAG). "Psychiatrische Versorgung: Kinder und Jugendliche." Accessed November 7, 2023. <https://www.bag.admin.ch/bag/de/home/strategie-und-politik/politische-auftraege-und-aktionsplaene/politische-auftraege-im-bereich-psychische-gesundheit/postulat-massnahmen-im-bereich-psychische-gesundheit1/kinder-und-jugendliche.html>.

Bundesamt für Gesundheit (BAG). "Psychische Gesundheit und Psychiatrische Versorgung: Politische Aufträge des Bundes." Accessed December 21, 2023. <https://www.bag.admin.ch/bag/fr/home/strategie-und-politik/politische-auftraege-und-aktionsplaene/politische-auftraege-im-bereich-psychische-gesundheit.html>.

Centre for Urban Design and Mental Health (UD/MH). "City Case Studies." Accessed October 17, 2023. <https://www.urbandesignmental-health.com/cities.html>.

Chroniques d'Architecture. "Hôpital de Jour à Chevilly-Larue par Tolila+Gilliland." Accessed December 11, 2023. <https://chroniques-architecture.com/hopital-de-jour-chevilly-larue-tolila-gilliland/>.

Conseil Fédéral. "Internements Administratifs: La Réhabilitation des Personnes concernées ne fait que commencer." Accessed October 26, 2023. <https://www.admin.ch/gov/fr/accueil/documentation/communiques.msg-id-76236.html>.

"Créer un "Paysage de Soin" au sein des Villes pour éloigner Stress et Psychoses." Accessed October 12, 2023. <https://www.rts.ch/info/sciences-tech/environnement/14217283-creer-un-paysage-de-soin-au-sein-des-villes-pour-eloigner-stress-et-psychoses.html>.

Département de psychiatrie CHUV. "Centre Thérapeutique de Jour pour Adolescents (CTJA)." Accessed November 23, 2023. <https://www.chuv.ch/fr/fiches-psy/centre-therapeutique-de-jour-pour-adolescents-ctja>.

DETAIL. "Health Centre in Kitakami by UtA/Unemori Teco Associates." Accessed December 11, 2023. https://www.detail.de/de_en/gesundheitszentrum-in-kitakami-von-uta-unemori-teco-associates.

Eichenberger, Isabelle. "Recognising Switzerland's Slave Children," Accessed October 26, 2023. https://www.swissinfo.ch/eng/a-dark-chapter-in-history_recognising-switzerland-s--slave-children-/35429120.

espazium. "Construction d'un Nouveau Collège à Sion." Accessed December 26, 2023. <https://competitions.espazium.ch/de/wettbewerb/decisi/construction-d-un-nouveau-college-sion>.

fondation des hopitaux. "Favoriser le Bien-Être à l'Hôpital de Jour de Chevilly-Larue." Accessed December 11, 2023. <https://www.fondationhopitaux.fr/favoriser-lamelioration-du-bien-etre-a-l-hopital-de-jour-de-chevilly-larue/>.

Fondation l'Élan Retrouvé. "Hôpital de Jour de Chevilly-Larue." Accessed December 9, 2023. <https://www.elan-retrouve.org/places/hopital-de-jour-de-chevilly-larue/>.

Grey Canopy. "'Fundamentals of Foundation' Tzu Chi Humanistic Youth Centre." Accessed December 15, 2023. <https://www.archify.com/sg/project/fundamentals-of-foundation-tzu-chi-humanistic-youth-centre>.

Grey Canopy with Kyoob Architects. "Fundamentals of Foundation: Tzu Chi Humanistic Youth Center." Accessed December 15, 2023. <https://www.indeawards.com/the-wellness-space-2020/fundamentals-foundation-tzu-chi-humanistic-youth-center/>.

GWJ. "Kinder- und Jugendpsychiatrie Bern." Accessed October 21, 2023. <https://www.gwj.ch/projekte/drei-haeuser-ein-ort>.

Hadid, Zaha. "The Way Forward: In the Words of Zaha Hadid". RIBA Gold Medal Acceptance Speech, London, 3 February 2016. Accessed 3 January, 2024. <https://www.architectural-review.com/essays/the-way-forward-in-the-words-of-zaha-hadid>.

Haut-Valais Psychiatric Centre. "Adult Day Clinic." Accessed October 23, 2023. <https://www.valaishospital.ch/specialities-from-a-to-z/specialities-from-a-to-z/psychiatry-and-psychotherapy/haut-valais-psychiatric-centre/adult-day-clinic>.

Helfer, Jennifer. "Le Covid-19 a révélé l'État de la Santé Mentale des Jeunes," August 18, 2021. Accessed October 3, 2023. <https://saez.ch/article/doi/saez.2021.20045>.

Herzog & de Meuron. "519 Ronquoz 21." Accessed December 22, 2023. <https://www.herzogdemeuron.com/projects/519-ronquoz-21/>.

Hôpital du Valais. "Avec CAP'Ado l'Hôpital du Valais renforce le Soutien Psychiatrique destiné aux Adolescents." Accessed December 22, 2023. https://www.hopitalduvalais.ch/lhopital-du-valais/actualites/en-detail?tx_news_pi1%5Baction%5D=detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=2536&cHash=-014ec919226d6d55f505fa0f3d55af00.

HUG. "HÔPITAL PSYCHIATRIQUE : LE PARCOURS PATIENT." Accessed October 21, 2023. <https://www.hug.ch/psychiatrie-adulte/hopital-psychiatrique-parcours-patient>.

HUG. "La Maison de l'Enfance et de l'Adolescence réinvente l'Hôpital." Accessed December 29, 2023. <https://mea.hug.ch/>.

HUG. "LES TRAITEMENTS PSYCHIATRIQUES ET PSYCHOTHÉRAPEUTIQUES." Accessed October 10, 2023. <https://www.hug.ch/psychiatrie-adulte/traitements-psychiatriques-psychotherapeutiques>.

HUG. "MALATAVIE: Unité de Crise pour Ados." Accessed November 2, 2023. <https://www.hug.ch/enfants-ados/pedopsychiatrie/malatavie-unite-crise-pour-ados>.

HUG. "MEA - Le Bâtiment." Accessed October 2, 2023. <https://mea.hug.ch/le-batiment/>.

- HUG. "Pluriprofessionnels de Santé: Mission." Accessed October 31, 2023. <https://www.hug.ch/pluriprofessionnels-sante/mis-sion-lieux-art-therapeutes>.
- HUG. "Santé des Ados." Accessed November 2, 2023. <https://www.hug.ch/enfants-ados/specialites-medicales-chirurgicales/sante-ados>.
- Integrierte Psychiatrie Uri, Schwyz, und Zug. "Psychiatrische Versorgung über drei Kantone." Accessed October 21, 2023. <https://www.triapius.ch/ueber-uns/triapius-ag/ueber-triapius>.
- ISFM. "Titres de Spécialiste et Formations Approfondies (Formation Postgraduée)." Accessed October 19, 2023. <https://www.siwf.ch/fr/formation-postgraduee/titres-specialiste-formations.cfm>.
- ITU - AI for good. "Dorier Maison de l'enfant et de l'adolescent HUG 2023." Accessed November 5, 2023. <https://aiforgood.itu.int/dorier-maison-de-lenfant-et-de-ladolescent-hug-2023/>.
- Iype, Jincy. "Inside the Porous, 'Park-like' Kitakami Health & Childcare Support Complex." Accessed December 11, 2023. <https://www.stirworld.com/see-features-inside-the-porous-park-like-kitakami-health-childcare-support-complex>.
- James, Helen. "Portraying Survivors of a Cruel Swiss Care System." Accessed October 26, 2023. https://www.swissinfo.ch/eng/society/dark-chapter-in-history_portraying-survivors-of-a-cruel-swiss-care-system/45041050.
- Kanton Nidwalden. "Psychiatrie: Drei Kantone - Eine Versorgungsregion. Luzern, Obwalden und Nidwalden gehen in der Psychiatrie seit dem Jahre 2017 gemeinsam Neue Wege." Accessed October 21, 2023. <https://www.nw.ch/gesodirektionssekrdienste/4514>.
- Kanton Zug. "BGS 826.162 - Konkordat der Kantone Uri, Schwyz und Zug betreffend die Psychiatrische Versorgung (Psychiatriekonkordat)." Accessed October 21, 2023. https://bgs.zg.ch/app/de/texts_of_law/826.162.
- Kitakami City. "Introducing the Kitakami City Health and Childcare Support Complex hoKko!" Accessed December 11, 2023. <https://www.city.kitakami.iwate.jp/life/soshikikarasagasu/kenko/iryorenkeikakari/hokenkosodateshienhukugoushietu/19227.html>.

Knorr & Pürckhauer Architekten. "Klinik für Kinder- und Jugendpsychiatrie, Chur." Accessed October 22, 2023. <https://knorrpuerckhauer.ch/projekte/kinder-und-jugendpsychiatrie-chur/>.

kyoob architects. "Tzu Chi Humanistic Centre." Accessed December 15, 2023. <https://kyoob.sg/tzu-chi-humanistic-centre/>.

LA RÉDACTION. "Hôpital de Jour à Chevilly-Larue par Tolila + Gilliland." Accessed December 9, 2023. [https://chroniques-architecture.com/hopital-de-jour-chevilly-larue-tolila-gilliland/#:~:text=L'atelier%20Tolila%20%2B%20Gilliland%20\(du%20spectre%20de%20l'autisme.](https://chroniques-architecture.com/hopital-de-jour-chevilly-larue-tolila-gilliland/#:~:text=L'atelier%20Tolila%20%2B%20Gilliland%20(du%20spectre%20de%20l'autisme.)

Liu Anqi (Lianhe Zaobao). "Residents and Migrant Workers work together to paint Colorful Paintings depicting Diverse Cultures." Accessed December 15, 2023. <https://www.zaobao.com.sg/news/singapore/story20230813-1423440>.

L'Observatoire CAUE. "HÔPITAL DE JOUR POUR ENFANTS." Accessed December 9, 2023. <https://www.caue-observatoire.fr/ouvrage/hopital-de-jour-enfants/>.

MEDINISIDE. "UPD Bern wollen bis Ende 2028 Neubau beziehen." Accessed December 29, 2023. <https://www.medinside.ch/upd-wollen-neubau-bis-ende-2028-beziehen-20230306>.

MEMENTO ARCHITECTURE. "Concours de Projets d'Architecture OIKEN - 1er Rang | 1ère Mention." Accessed December 22, 2023. <https://www.memento-arch.ch/17-projet>.

National Parks Board. "Yishun Pond Park." Accessed December 16, 2023. <https://www.nparks.gov.sg/gardens-parks-and-nature/parks-and-nature-reserves/yishun-pond-park>.

Observatoire Valaisan de la Santé (OVS). "Population selon le Lieu de Domicile, Valais." Accessed December 21, 2023. <https://www.ovs.ch/fr/indicateurs/id-1241-population-selon-le-lieu-de-domicile-valais/>.

Office Fédéral de la Santé Publique (OFSP). "Prise en Charge des Personnes atteintes de Maladies Psychiques." Accessed October 18, 2023. <https://www.bag.admin.ch/bag/fr/home/strategie-und-politik/politische-auftraege-und-aktionsplaene/politische-auftraege-im-bereich-psychische-gesundheit/postulat-massnahmen-im-bereich-psychische-gesundheit1.html>.

Office Fédéral de la Santé Publique (OFSP). "Processus Relatifs aux Soins Psychiatriques et Psychothérapeutiques destinés aux Enfants et aux Adolescents." Accessed October 18, 2023. <https://www.bag.admin.ch/bag/fr/home/das-bag/publikationen/forschungsberichte/forschungsberichte-interprofessionalitaet-im-gesundheitswesen/forschungsberichte-interprofessionalitaet-M19-psychiatisch-psychotherapeutische-versorgung-ipz.html>.

Office Fédéral de la Statistique (OFS). "Atlas Statistique de La Suisse: Population Résidante Permanente, en 2022." Accessed December 21, 2023. https://www.atlas.bfs.admin.ch/maps/13/fr/17492_72_71_70/27090.html.

Office Fédéral de la Statistique (OFS). "Communiqué de Presse 12.12.2022: Troubles Mentaux: Hausse sans Précédent des Hospitalisations pour les Jeunes Femmes de 10 à 24 Ans." Accessed October 20, 2023. <https://www.bfs.admin.ch/bfs/fr/home/statistiques/catalogues-banques-donnees.assetdetail.23772012.html>.

Office Fédéral de la Statistique (OFS), Section mobilité. "Pendulaires pour des Raisons de Formation." Pendularité (PEND). Accessed December 23, 2023. <https://www.bfs.admin.ch/bfs/fr/home/statistiques/mobilite-transport/transport-personnes/pendularite.html#-135588440>.

PDGR. "Neubau Klinik für Kinder- und Jugendpsychiatrie." Accessed December 29, 2023. <https://www.pdgr.ch/neubau-klinik-fuer-kind-er-und-jugendpsychiatrie/>.

phalt Architekten. "Kinder und Jugendpsychiatrie Liestal BL." Accessed December 29, 2023. <https://phalt.ch/de/projekte/kinder-jugend-psychiatrie/>.

Psychiatrische Dienste Aargau (PDAG). "Work Coaching." Accessed November 23, 2023. <https://www.pdag.ch/fuer-patientinnen-patienten-und-angehoerige/alle-angebote/arbeitscoaching>.

Psychiatrische Universitätsklinik Zürich. "Zeitreise." Accessed October 26, 2023. <https://www.pukzh.ch/ueber-uns/zeitreise/>.

RTS. "À Genève, les Hospitalisations Psychiatriques des 10-24 Ans augmentent." Accessed November 7, 2023. <https://www.rts.ch/info/regions/geneve/13953873-a-geneve-les-hospitalisations-psychiatriques-des-1024-ans-augmentent.html>.

Schmid, Andreas. "Umstrittene Kesb-Praxis: Jugendliche landen Unschuldig im Gefängnis." SRF4 News aktuell. Accessed November 23, 2023. <https://www.srf.ch/news/schweiz/umstrittene-kesb-praxis-jugendliche-landen-unschuldig-im-gefaengnis>.

SION. "Le Site Historique des Anciens Abattoirs de Sion se transforme en Centre de Compétences pour l'Économie Circulaire." Accessed December 26, 2023. <https://www.sion.ch/communiqués/1835596>.

SION. "Liaison Câblée Plaine - Montagne." Accessed December 26, 2023. <https://www.sion.ch/ronquoz21/14924>.

SION. "Ronquoz 21: Calendrier & Prochaines Étapes." Accessed December 22, 2023. <https://www.sion.ch/ronquoz21/14918>.

Spital Emmental. "Intensive Case Management." Accessed October 23, 2023. https://www.spital-emmental.ch/Intensives_Case-Management.

SWI. "Environ 60'000 Personnes ont été internées en Suisse au 20e Siècle." Accessed October 23, 2023. <https://www.swissinfo.ch/fre/toute-l-actu-en-bref/environ-60-000-personnes-ont-%C3%A9t%C3%A9-intern%C3%A9es-en-suisse-au-20e-si%C3%A8cle/44973710>.

The Center for Health Design (CHD). "About EBD: What is Evidence-Based Design (EBD)?" Accessed November 2, 2023. [https://www.healthdesign.org/certification-outreach/edac/about-ebd#:~:text=Evidence%2DBased%20Design%20\(EBD\),achieve%20the%20best%20possible%20outcomes](https://www.healthdesign.org/certification-outreach/edac/about-ebd#:~:text=Evidence%2DBased%20Design%20(EBD),achieve%20the%20best%20possible%20outcomes).

The Centre for Urban Design and Mental Health. "How Urban Design can impact Mental Health." Accessed October 17, 2023. <https://www.urbandesignmentalhealth.com/how-urban-design-can-impact-mental-health.html>.

Tim Abrahams (Architectural Record). "VK's De Korbeel Youth Hospital opens out to the Community." Accessed December 11, 2023. <https://www.architecturalrecord.com/articles/16345-vks-de-korbeel-youth-hospital-opens-out-to-the-community>.

Tolila+Gilliland. "Children's Day Hospital in Chevilly-Larue." Accessed December 9, 2023. <https://tolilagilliland.com/Children-s-Day-Hospital-Chevilly-Larue>.

- Tzu Chi Singapore. "Co-Working Space serves as Platform to foster Mutual Support." Accessed December 17, 2023. <https://www.tzuchi.org.sg/en/news-and-stories/local-news/co-working-space-serves-as-platform-to-foster-mutual-support/>.
- Tzu Chi Singapore. "Tzu Chi Humanistic Youth Centre." Accessed December 15, 2024. <https://www.tzuchi.org.sg/en/our-missions/education/tzu-chi-humanistic-youth-centre/>.
- Tzu Chi Singapore. "Youth Wellness." Accessed December 15, 2023. <https://hyc.tzuchi.org.sg/what-we-do/youth-wellness/>.
- UNIGE. "Exposition Figures de l'ombre (Aliénés): Des Vernets à Bel-Air." Accessed October 29, 2023. <https://www.unige.ch/fapse/figures-de-l-ombre/alienes/Vernets-Bel-Air>.
- Universitäre Psychiatrische Dienste Bern. "Geschichte der UPD." Accessed October 26, 2023. <https://www.upd.ch/de/ueber-uns/geschichte.php>.
- Universitäre Psychiatrische Kliniken Basel. "Geschichte." Accessed October 26, 2023. <https://www.upk.ch/ueber-uns/klinikportrait/geschichte>.
- Université de Neuchâtel (UNINE). "Urban Remediation in Early Psychosis: A Living Lab to Emplace Recovery in the City." Accessed November 5, 2023. <https://www.unine.ch/geographie/es/home/recherche/geographies-urbaines/urban-remediation-in-early-psy-1.html>.
- VK architects+engineers. "Child and Adolescent Mental Health Hospital: A Playful and Positive Design Strategy." Accessed December 2, 2023. <https://www.vk-architects-engineers.com/en/news/child-and-adolescent-mental-health-hospital-a-playful-and-positive-design-strategy>.
- World Health Organization (WHO). "Coming of Age: Adolescent Health." Accessed November 7, 2023. <https://www.who.int/news-room/spotlight/coming-of-age-adolescent-health>.
- World Health Organization (WHO). "Mental Disorders." Accessed October 12, 2023. <https://www.who.int/news-room/fact-sheets/detail/mental-disorders>.
- World Health Organization (WHO). "Urban Health." Accessed November 5, 2023. https://www.who.int/health-topics/urban-health#tab=tab_1.

