



C/CAN 2025

City Cancer Challenge

Financing Sustainable
City Cancer Treatment
Infrastructure Report

Dalberg



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**Union for International Cancer Control,
January 2017**

Letter from

Cary Adams



The Union for International Cancer Control (UICC) unites the cancer community in the fight against the global cancer burden. Our 1,000 member organisations and our partners are promoting greater equity and advocating for cancer control in more than 160 countries.

Together, we have launched the C/Can 2025: City Cancer Challenge, in response to a growing global cancer crisis. The number of cancer cases is projected to grow around the world and with an increasing concentration in cities. The challenge faced by cities could become overwhelming. Four billion people live in cities today, but few of them have access to high-quality cancer treatment outside of high-income countries.

In 2012, the global community committed to reduce premature deaths from non-communicable diseases (NCDs) by 25% by 2025 and this commitment was reaffirmed in 2016 through Sustainable Development Goal (SDG) 3 which set out an ambition to deliver a 30% reduction by 2030. The Sustainable Development Goals also committed to create sustainable cities (SDG 11), and to do so through partnerships (SDG 17). C/Can 2025 addresses the urgent need to move political commitments made at the global level into fully functional, comprehensive cancer solutions, reaching the majority of the world's population.

We know that it is hard for city leaders to identify a sustainable source of financing for new health infrastructure. I hope that this report helps de-mystify the available financing tools, and guides city leaders towards tools which optimise their resources. We see real and exciting opportunities to build partnerships between public, private and philanthropic investors, mobilising funds for cancer infrastructure and, indeed, similar non-communicable disease health infrastructure at the city level.

We are fortunate to live at a time when cancer and other NCDs enjoy an unprecedented global profile. It is now the time to take the global rhetoric and convert it into action on the ground. C/Can 2025 signals a paradigm shift in the way international organisations wish to help national governments and city leaders address the growing burden of cancer they are facing.

City leaders cannot do this alone. UICC has committed to bringing together the most important stakeholders from domestic governments, the donor community, civil society and the private sector. We strongly believe the global community, working together, can meet the challenge posed by cancer in cities around the world.

Cary Adams

Chief Executive Officer,
Union for International Control (UICC)



The Union for International Cancer Control (UICC) and its partners call on cities to join the C/Can 2025: City Cancer Challenge and lead the global response to cancer. C/Can 2025 aims to increase the number of people with access to quality cancer services in cities around the world, through a network of motivated partners including city leaders, governments, NGOs, UN agencies, and domestic & international businesses. UICC and its partners are committed to working alongside cities as they invest in high quality cancer treatment infrastructure for their citizens.

Non-communicable diseases (NCDs), including common cancers, are fast becoming one of the largest challenges facing the global health community. An estimated 38 million deaths each year are due to NCDs, the largest share of which are cancer, diabetes, cardiovascular diseases, and chronic respiratory diseases. Cancer alone now kills more people than HIV/AIDS, malaria, and tuberculosis combined, directly affecting one in every three people in the world during their lifetime. By 2025, almost 50% of new cancer cases will be seen in low and medium Human Development Index countries¹. Yet, to date, most investment in combatting cancer has been made in high-income countries.

The ambitious targets of the United Nation's Sustainable Development Goals (SDGs) create a timely imperative to invest in NCD treatment in cities, and specifically in cancer treatment. The global community has committed to reduce premature deaths from NCDs by 25% by 2025 and by 33% by 2030 (SDG 3); to make cities inclusive, safe, resilient, and sustainable (SDG 11); and to revitalise global partnerships between governments, the private sector, and civil society (SDG 17). Meeting these goals will not be possible without a full package of prevention, screening, diagnosis, and treatment for cancer and other NCDs at the city level. To date, much of the effort to reduce mortality has focused on addressing shared risk factors for cancer and other NCDs, but this alone will not be sufficient to meet the SDG targets. With 54% of the world's population already living in cities, and that number expected to rise above 60% in the next 10 years, cities present a critical opportunity to reach the majority of people with cancer treatment infrastructure.

Clear guidance is available on the essential medicines and technologies needed to treat cancer at the city level. As part of C/Can 2025, UICC and its partners have outlined a core package of cancer interventions at the city level to guide city leaders and policy makers on the elements needed to operationalise quality cancer treatment services.² This critical core package is the culmination of a comprehensive consultation process with subject experts in cancer care and research from around the world. It builds on recent standout milestones for the global cancer community, including the addition of 16 new cancer medicines to the World Health Organization (WHO) Model Essential Medicines List in 2015³, and the global commissions on expanded access to cancer surgery and radiotherapy^{4,5}. It is also closely aligned with the WHO guidance on interventions for the treatment and care of specific cancers⁶.

There is a strong social and economic case for city governments to invest in cancer treatment. In total, cancer is estimated to cost world economies up to USD 1.16 trillion each year; a figure that is projected to grow exponentially. By comparison, the estimated cost of providing cancer care in combination with other NCD infrastructure across all low- and middle-income countries is just USD 40 billion per year⁷. Investment in cancer treatment services also presents an opportunity to grow the healthcare sector, creating high-skilled jobs and economic returns at the city level, as well as, in some cases, competitive financial returns for private investors. Most importantly, the investment will benefit citizens that are directly affected by cancer as well as citizens accessing the broader healthcare system.

This report identifies the financing tools that city leaders can use to develop sustainable cancer infrastructure.

1. The American Cancer Society, World Health Organization & Union for International Cancer Control, The Cancer Atlas, 2015. Please note that this includes both communicable and non-communicable cancers.
2. Union for International Cancer Control, C/Can 2025: City Cancer Challenge Guiding Principles for Quality Cancer Treatment Services in Cities
3. World Health Organization, WHO model list of essential medicines: 19th list, 2015.
4. Jaffray DA, Knaul FM, Atun R, Adams C, Barton MB, Baumann M, et al., Global Task Force on Radiotherapy for Cancer Control, The Lancet Oncology. 2015 Sep;16(10):1144–6.
5. Lancet, Lancet Commission on Global Surgery: Implementation tools, <http://www.lancetglobalsurgery.org/> (accessed 2016 Sep 23).
6. World Health Organization, Updated Appendix 3 of the WHO Global NCD Action Plan 2013–2020, 2016.
7. World Health Organization, WHO Global Coordination Mechanism on the Prevention and Control of Noncommunicable Diseases Final Report 2015.

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Introduction



This report is intended to support city leaders who are looking to finance cancer infrastructure, including those that are a part of C/Can 2025. It accompanies and complements guidance that C/Can 2025 is providing for city leaders on the core package of cancer treatment services needed at the city level, which is outlined in the “Guiding Principles for Quality Cancer Treatment Services in Cities” report⁸. While these reports are intended for decision makers at the city level, it is important to note that the investment and support of national governments, development partners, civil society, and the private sector will be central to the success of C/Can 2025 cities.



8. Union for International Cancer Control, C/Can 2025: City Cancer Challenge Guiding Principles for Quality Cancer Treatment Services in Cities

Executive Summary

Cities will need to raise significant financing to build, expand, and run cancer treatment infrastructure.

Country and city leaders should first determine their infrastructure need, based on an assessment of the most cost-effective and functional route to providing cancer services within the existing system. Financing will likely be needed for “one-off” upfront investments in cancer treatment centres, particularly building facilities and purchasing equipment, as well as for ongoing operating costs, including salaries, procurement of supplies, and maintenance of equipment. The one-off cost is estimated to be between USD 10–50 million for one new cancer treatment centre or approximately USD 5–25 million to upgrade an existing facility. Ongoing costs are estimated at approximately USD 2–20 million per year per centre but would vary if delivered across multiple locations or in combination with different services⁹. In most cities, this represents an increase above current investments by private, public, and/or philanthropic investors.

Ultimately, there is no “one-size-fits-all” approach to building and operating cancer treatment infrastructure. City leaders will need to determine the best mix of public, private, and public-private service provision as they balance the costs of healthcare delivery with a drive towards universal health access. Local context and the interests of investors are likely to drive the optimal balance of public, private, and/or philanthropic investment. In some circumstances, city leaders may be able to take the final decision on the approach; in others, the final decision-making power may lie with regional or national levels of governments, implying that city leaders should coordinate internally to mobilise public commitment and investment.

In most cases, city leaders will likely need to attract and mix capital from the public, private, and philanthropic sectors. Traditional single-source financing for cancer treatment should still be explored. Cities could increase public spending through reallocation of city or national budgets, explore ways to incentivise increased private investment in healthcare, and/or advocate for greater funding of cancer treatment by philanthropic partners. However, in most cases, this single-source approach is unlikely to meet the scale of investments needed in cities.

A range of financing tools make it possible to “crowd in” new or multiple capital sources in order to mobilise additional resources and increase the efficiency and sustainability of existing investments.

These tools are sometimes referred to as “innovative financing tools” or “blended financing tools” because they go beyond traditional, single-source public or philanthropic investment. They fall into four groups (a full list and explanation of each tool can be found on page 11):

- **Securities and derivatives** (e.g., blended finance investments, guarantees, etc.)
- **Results-based financing instruments** (e.g., development impact bonds, performance-based contracts, etc.)
- **Voluntary contributions** (e.g., cross-subsidisation schemes, consumer donations)
- **Compulsory charges** (e.g., dedicated taxes)

There are five “high-potential” financing tools that (i) can most feasibly be structured at the city level, and (ii) have a track record of success in similar infrastructure investments¹⁰. Three of the high-potential tools are most commonly used for funding one-off infrastructure investments¹¹ (but could also be used in some circumstances for ongoing costs¹²):

- **Commercial investments** are made by private investors into an enterprise (e.g., a private healthcare provider), usually with the expectation of market-rate returns. The investment can be in the form of debt, which is repaid with interest by the enterprise receiving the debt, or equity, where the investor receives part ownership in the enterprise (and an agreed upon claim on its future earnings). For example, Icon Group, a private healthcare provider in Australia, has used commercial debt and equity to build and operate new cancer treatment centres across the Asia-Pacific region.

9. Estimated costs are based on figures provided during Dalberg interviews with experts. Wide ranges likely reflect the scale of facility, range of service provided, geographies etc. It is important to note that these figures are for infrastructure alone.

10. The feasibility of a tool is determined by the time and effort required to structure and launch the mechanism at the city level. The track record of the tool is determined by its success in mobilizing funding for health infrastructure in the city context, or similar investments.

11. One-off infrastructure investments are also often referred to as capital expenditures.

12. Ongoing costs are also often referred to as operating expenditures.

Executive Summary

- **Blended finance investments** are made by a mix of public, private, and/or philanthropic investors in an enterprise, and can take the form of either equity or debt. The mix of priorities among investors allows blended finance to provide better terms to enterprises that are creating social impact, while still “crowding in” commercial investors that are looking for market or near-market returns. This is because the philanthropic and/or public investors often have lower return expectations or higher risk tolerance. For example, Deutsche Bank’s Eye Fund attracted commercial, public, and philanthropic investors in order to provide low-cost loans to eye care hospitals across Latin America, Asia, and Africa.
- **Guarantees** are financial commitments made by a third party to partially or fully repay a debt or equity investment in certain circumstances (e.g., default, political instability, etc.). Guarantees reduce the risk of investment, improving the chances of providers being able to access finance and/or improving the terms of borrowing. For example, USAID’s Development Credit Authority (DCA) provided a guarantee to a chain of low-cost primary care centres in India, allowing them to access debt for scale-up.

Two of the high-potential tools are most commonly used to fund the ongoing costs of service delivery (although in some cases they may also finance one-off investments):

- **Cross-subsidisation schemes** differentiate the price charged to consumers by their ability to pay. Consumers with a higher ability to pay are charged a higher price to subsidise the service for consumers with a lower ability to pay, effectively providing sustainable finance for the ongoing costs of affordable care. For example, private providers like salaUno in Mexico provide cross-subsidised eye care, where patients with higher ability to pay can improve their patient experience by purchasing additional amenities or services. The resulting revenue allows salaUno to provide free surgery to those patients with lower ability to pay.
- **Performance-based contracts** disburse payments based on the achievement of specific pre-agreed upon performance targets. They use public or philanthropic financing to encourage efficiency in private or public service providers. For example, Rwanda’s district hospitals are financed by the Ministry of Health and various development partners using performance-based contracts, with financial incentives linked to the number and quality of services provided. Performance-

based contracts can be a useful tool in public-private partnerships, ensuring that private healthcare providers deliver high-quality services where ongoing costs are paid or subsidised by the public sector or donors. The best practices for engaging and partnering with the private sector are explored on page 23.

Each of the case studies mentioned above can be found in the Annex; a full explanation of each tool can be found on page 27.

In addition, taxes (dedicated or sin) and thematic municipal bonds are also promising based on their track record of financing infrastructure investments; though these tools may be difficult to rapidly implement at the city level. Cities around the

world are increasingly looking at these tools to fund similar infrastructure. By contrast, consumer donations, awards and prizes, development impact bonds, volume guarantees, and advanced market commitments (AMCs) have shown less promise in producing the types of investment that will be needed to support cancer treatment. The reasons for this and the above prioritisation are further explored on page 15.

Each city faces a unique context that will shape its choice among these “high-potential” financing tools.

When selecting a financing tool, city leaders should determine whether the desired project requires one-off and/or ongoing financing and whether they want to support public or private healthcare provision. To help illustrate the most appropriate tools city leaders might choose based on their circumstances, this report outlines (beginning on page 15) several potential scenarios and the most appropriate financing tools for each case. In summary:

- **For one-off financing in the range of USD 5 – 25 million to upgrade existing public healthcare facilities:** blended finance investments, guarantees, or potentially thematic municipal bonds (an emerging tool at the city level).
- **For one-off financing in the range of USD 10 – 50 million to build a new private cancer treatment centre:** commercial investments, blended finance investments, or guarantees.
- **For ongoing financing to improve the quality of cancer treatment services in existing public facilities:** performance-based contracts or blended finance investments, or potentially “sin taxes” (an emerging tool at the city level).

- **For ongoing financing to increase access to the private healthcare system:** cross-subsidisation schemes or performance-based contracts.

Final selection of a tool will be driven by several additional factors, including the sources of financing required for each tool, the urgency with which financing is needed, the short-term and long-term costs to the city of launching the financing tool, and the length of the payback period for the financing. Ultimately, each city should engage in a process that carefully assesses its intended projects and realistically considers its constraints to ensure that it selects the most suitable tools.

Some cancer treatment infrastructure could benefit from an approach that combines two or more tools.

A multi-tool approach is commonly taken when there is a need to further de-risk investment and/or when there are two distinct needs that cannot be addressed with only one tool. For example, a city leader could consider obtaining a guarantee for a commercial investment, if a commercial investor perceived the investment as too risky without some sort of guarantee. Alternatively, a city leader could fund the one-off infrastructure associated with building a new cancer centre via a blended finance investment into a public-private partnership, governed by a performance-based contract which funds the ongoing costs of the health provider. Ultimately, cities will need to determine whether or not a multi-tool approach will reduce investor risk and/or cover additional investment needs in proportion to the additional time and expense required to structure a more complex approach. The Icon Group and Deutsche Bank case studies in the Annex illustrate how tools can be used in combination.

Regardless of the approach taken, there are three 'best practices' for city leaders when seeking to finance sustainable cancer treatment infrastructure:

- **Understand the needs of your investors and their target risk-return profile.** A financing tool cannot be successful or impactful without sufficient investor interest. Most, if not all, commercial investors and private healthcare providers will be looking for a competitive financial return on their investment that reflects their level of exposure to risk. Early outreach to investors and early alignment on expected risk and return will help balance and align financial and health returns.

- **Identify who will pay for the ongoing cost of treatment.** The financing tools outlined above can increase the supply and reduce the cost of high-quality treatment; however, there will always need to be demand from an "end-payer" for services. The end-payers can be the public sector (city or national budgets), development partners (donor and other philanthropic contributions), or private citizens (including out-of-pocket and insurance payments). City leaders should "sanity check" the scale and type of proposed investment against the end-payer's estimated ability and willingness to pay.

- **Build capacity at the city level to structure financial tools and engage the private sector.**

Successful build-out of cancer treatment infrastructure will require financial expertise as well as coordination and collaboration with the private sector. Cities may be able to bring in outside expertise on a one-off basis or else seek assistance from development partners with experience in structuring financial products and/or public-private partnerships (PPPs). There may be a case for investing in longer-term capacity at the city level in order to handle PPP deals across a range of health infrastructure, or infrastructure projects more broadly.

The remainder of this report provides greater detail on the financing tools available to city leaders as they build out cancer treatment infrastructure. This report is intended to be the starting point for city leaders as they begin the process of choosing a financial approach suited to their context. The focus on city leaders in this report should not obscure the fact that city leaders will need the support of the national government, donors, and the private sector to meet the challenge of developing cancer treatment infrastructure. The end of this report lays out some high-level next steps for stakeholders looking to provide support to city leaders.

Financing Tools For Cancer Treatment



Cities will need to raise significant financing to build, expand, and operate cancer treatment infrastructure.

The estimated cost of building one new cancer treatment centre and installing the necessary equipment is between USD 10 – 50 million. Upgrading an existing hospital or cancer treatment facility to be able to provide a full suite of cancer services costs an estimated USD 5 – 25 million in one-off investments. The ongoing expense of providing cancer treatment creates a burden of approximately USD 2 – 20 million per year on public sector budgets, insurance schemes, and/or private citizens¹³.

Ultimately, there is no “one-size-fits-all” approach to financing and operating cancer treatment infrastructure.

Country and city leaders will need to determine the best mix of public, private, and public-private service provision as they drive towards universal healthcare access. This includes determining the best way to leverage the scale, expertise, and potential efficiencies of the private sector while also increasing equitable access to healthcare for patients, regardless of their ability to pay. Similarly, the optimal balance of public, private, or philanthropic investment will be driven by the context faced by city leaders, including the interest of different investors. In some circumstances, city leaders may be able to take the final decision on the approach; in others, the final decision-making power may sit at the regional or national levels of governments, implying that city leaders should coordinate internally to mobilise public commitment and investment.

Cities have a range of options for financing cancer treatment infrastructure, from traditional, single-source financing to tools that provide an opportunity to mix capital from public, private, and philanthropic sources.

Public and philanthropic investment has often been used to subsidise or eliminate out-of-pocket payments for healthcare for private citizens, usually in the public healthcare system. Private investment has historically supported the development of a private healthcare system by increasing patient choice and creating incentives for healthcare providers to reduce the cost of treatment. Some financing tools go beyond traditional, single-source public or philanthropic investment to create new or more efficient funding streams for public, private, or public-private healthcare providers.

City leaders should explore ways to increase and redirect traditional funding for cancer treatment.

For example, cities could increase public investment in infrastructure by increasing overall health budgets through increased revenue, increased savings, or a reallocation of city budgets. Cities could incentivise private sector investment, particularly in innovative business models that provide accessible and affordable cancer treatment infrastructure to the general population. Finally, city and national governments should consider ways to increase funding from philanthropic partners (e.g., donors, foundations, corporations, and high-net-worth individuals), particularly in light of recent global commitments to combat NCDs, strengthen health systems, and improve urban welfare.

13. Estimated costs are based on figures provided during Dalberg interviews with experts. Wide ranges likely reflect the scale of facility, range of service provided, geographies, etc. It is important to note that these figures are for infrastructure alone.

However, in many cases the current levels of traditional financing will not be sufficient to meet the demand for cancer treatment. Public sector health budgets are in most cases constrained and face many competing priorities, although modest reallocation or increases in spending may be possible. Private sector investors often face high risks and decreasing returns as they expand services to customers with lower ability to pay, making them less willing to invest. Philanthropic partners have not historically prioritised cancer infrastructure; even where that is changing, the funding available from donors is small relative to public sector budgets and potential private sector capital.

City leaders have a range of financing tools at their disposal as they seek to scale cancer care and treatment. These tools go beyond traditional, single-source investment to create new or more efficient funding streams for public, private, or public-private healthcare providers. They are sometimes referred to as “innovative financing tools” or “blended financing tools”. Financing tools can be categorised into four groups, and can be employed individually or in combination with another tool. For example, a guarantee could be used to de-risk a commercial investment or a thematic municipal bond; a blended or commercial investment could be used to launch a cross-subsidisation model.

Figure 1: List of potential financing tools by group¹⁴

1. Securities and Derivatives
Commercial investments
Blended finance investments
Guarantees
Thematic municipal bonds
2. Results-based Financing
Performance-based contracts
Awards and prizes
Development impact bonds
Volume guarantees and advanced market commitments
3. Voluntary Contributions
Cross-subsidisation schemes
Consumer donations
4. Compulsory Charges
Dedicated taxes

1. Securities and derivatives include debt securities (such as bank loans and bonds), equity securities (such as stocks in a company), and derivative securities (such as guarantees). For the purpose of this report, these investments are grouped into four broad categories:

- **Commercial investments** are made by private investors in an enterprise (e.g., private healthcare providers) with the aim of generating a financial return that is comparable with the return they could earn from an investment with a similar risk profile. The investment can be in the form of debt, where borrowing enterprises commit to repaying investors with interest, or equity, where investors take part ownership of an enterprise and may agree to a claim on its future earnings¹⁵. One successful example of this tool is Icon Group, a private healthcare provider in Australia, which has used commercial investments to build and operate new cancer treatment centres across the Asia-Pacific region (see Annex for a full case study).

- **Blended finance investments** deliberately use public and/or philanthropic funds to attract private capital towards investments that deliver development impact in emerging and frontier markets¹⁶. As with commercial investments, blended finance investments can take the form of either debt or equity. For a blended finance investment to be an option, there needs to be a mix of public, private, and philanthropic investors that can provide capital and be willing to work together. A blended finance instrument is able to attract private capital because the typically lower return expectations of public or philanthropic investors allow private investors to still obtain market return while driving social progress¹⁷. One successful example of this tool is Deutsche Bank's Eye Fund, which attracted private, public, and philanthropic investors in order to provide low-cost loans to eye care hospitals across Latin America, Asia, and Africa (see Annex for a full case study).

14. Dalberg Global Development Advisors, Innovative Financing for Development: Scalable Business Models that Produce Economic, Social and Environmental Outcomes, September 2014.

15. Convertible debt and quasi-equity instruments are not considered in this report.

16. Convergence: Blending Global Finance, <https://convergence.finance>, (accessed 13 December 2016).

17. Convergence: Blending Global Finance, <https://convergence.finance>, (accessed 13 December 2016).

- **Guarantees** are financial commitments made by a third party to partially or fully repay a loan, loan portfolio, or equity investment under certain circumstances. These circumstances include loan defaults, political instability, regulatory change, and climate change¹⁸. Guarantees transfer some or all of the lending risk to the third party, thereby increasing the number of financial institutions and investors that are willing to invest and increasing the likelihood that an enterprise can access finance. A city government could either provide a guarantee against a borrowing enterprise, such as a healthcare provider looking to scale its cancer treatment services, or be the beneficiary of a guarantee if, for example, the city is borrowing large sums to invest in a new cancer treatment centre. A guarantee is relevant in a situation where investors are willing to finance infrastructure investments but require a guarantee to reduce their exposure to risk. One successful use of this tool is USAID's Development Credit Authority (DCA), which provided a guarantee to a chain of low-cost primary care centres in India, allowing them to access finance for scale-up (see Annex for a full case study).
 - **Thematic municipal bonds** can be issued by cities to raise capital that is earmarked for specific programmes. Investors are repaid with interest typically using long-term public expenditure savings or tax revenues generated by the subsequent investments. Cities must typically obtain a formal credit rating before they can issue bonds; the willingness of private investors to purchase these bonds usually depends on the quality of a city's credit rating. For a thematic municipal bond to be relevant, the investment being financed must be able to generate sufficient returns to repay the interest on the bond and the investment must be large enough to warrant the set-up costs of a bond. The United States and other high-income countries have long used municipal bonds to finance new infrastructure developments. While their use in emerging markets has been more limited, several cities have successfully issued them to finance infrastructure developments in specific sectors. For example, the City of Johannesburg has successfully issued municipal bonds worth more than USD 400 million since 2004 to help finance large-scale infrastructure projects in the city¹⁹.
- 2. Results-based financing** comprises financial instruments that reward the achievement of predetermined outputs or outcomes through incentive-based payments:
- **Performance-based contracts** disburse payments, usually from public or philanthropic donors, based on the achievement of specific pre-agreed upon performance targets. They can be used to encourage improved efficiency in the delivery of healthcare services. For a performance-based contract to be relevant, funders must first determine that creating an additional performance incentive—rather than providing a grant—would best achieve their social and financial objectives. In addition, there should be clear and measurable performance indicators that can serve as the basis for performance payments. One successful example of this tool is the use of performance-based contracts in Rwanda's health system, where the Ministry of Health and various development partners link financial incentives in Rwanda's district hospitals and health centres to the quality of service provided. Performance-based contracts can be a useful tool in public-private partnerships, ensuring that private healthcare providers deliver high-quality services where ongoing costs are paid or subsidised by the public sector or donors (see Annex for a full case study).
 - **Awards and prizes** are financial rewards provided to actors that develop solutions to a stated problem, often as part of a competitive selection process. These financial incentives increase the potential returns of upfront investment in research and development. For an award or prize to be relevant, innovators must have sufficient access to capital so that they can finance the required investments upfront. The creator of the award or prize must also be able to price it accurately: the financial incentive must be large enough to attract innovators to the problem and compensate them for the risk of financing their research upfront, but not too large that funders overpay for the desired outcome. One successful example of this tool is XPRIZE, which provides financial prizes for innovations that solve market failures in sectors such as health, energy, and education. So far, the organization has awarded seven prizes, totalling almost USD 40 million. While these prizes are often used to incentivise product development, XPRIZE is looking to launch prizes for infrastructure development, such as innovations that electrify roads so that electric vehicles can be charged while driving.

18. The World Bank, Guarantees Program, <http://www.worldbank.org/en/programs/guarantees-program>, (accessed 13 December 2016).

19. The City of Johannesburg, Investor Relations – City Bonds, http://joburg.org.za/index.php?option=com_content&view=article&id=6970&catid=155&Itemid=78&limitstart=1, (accessed 13 December 2016).

- **Development impact bonds (DIBs)**, or social impact bonds (SIBs), can be issued to raise capital for investing in infrastructure with pre-agreed upon performance targets. If the targets are achieved, investors are repaid with interest; if not, investors may lose some or all of their investment. In these structures, cities can be (i) outcome funders, who pay the investors when targets are achieved; (ii) implementers, who are responsible for delivering services; or, (iii) investors, who receive payment when the targets are achieved. DIBs provide a mechanism for pooling capital from many different stakeholders and have a structure that provides the flexibility to include tailored incentives. However, this flexibility means that DIBs are complex and time-consuming to structure. While several DIBs are being designed, few have actually been launched, particularly in the health sector. One successful example of this tool is the Cameroon Cataract Performance Bond, which is currently raising USD 2.5 million from investors to finance high-quality cataract surgeries. Capital raised through the DIB will be used to finance the one-off costs needed to launch a dedicated eye care hospital in Cameroon. Investors will be repaid with interest by an outcome funder, the Conrad N. Hilton Foundation, based on the volume and quality of completed cataract surgeries. Once launched, the Cataract Bond aims to prevent 18,000 cataract blindness cases over its five-year maturity period²⁰.
 - **Volume guarantees and advanced market commitments (AMCs)** are commitments made to purchase a pre-determined quantity of products or services. They are typically used to guarantee demand and establish a new market, and can help to jump-start the creation of sustainable markets. Volume guarantees or AMCs are relevant in situations where the demand is currently insufficient or too uncertain for companies to invest in providing a product or service. One successful example of the use of this tool is Gavi's AMC, which was launched in 2009 and guaranteed the purchase of new pneumococcal vaccines if the organization met certain requirements outlined in advance in a "target product profile" (TPP). The financial commitments made by donor countries and the Bill and Melinda Gates Foundation, with a total value of USD 1.5 billion, accelerated the development and manufacture of a pneumococcal vaccine. As a result of the AMC, the pneumococcal vaccine has now been introduced in the routine immunisation programmes of more than 50 low- and middle-income countries²¹.
- 3. Voluntary contributions** are financial transactions made at the discretion of individuals or organisations:
- **Cross-subsidisation schemes** differentiate the price charged to consumers for a service based on their ability to pay. Consumers with a higher ability to pay are charged a higher price to subsidise the service for consumers with a lower ability to pay. This model effectively provides a sustainable source of financing to cover the ongoing costs of providing healthcare. For a cross-subsidisation scheme to be relevant, there needs to be a sufficient pool of consumers with a higher ability to pay to subsidise the treatment of consumers with a lower ability to pay. One example of this tool's success is salaUno, a for-profit social enterprise that provides cross-subsidised eye care in Mexico. It offers a tiered-pricing system which allows higher-income patients to pay more for amenities such as higher-quality recovery rooms or reduced waiting times. The revenue generated through these patients, coupled with some direct subsidisation from the Mexican government and NGOs, allows salaUno to provide free surgery to approximately 70% of its patients (see Annex for a full case study).
 - **Consumer donations** are voluntary contributions made by individuals or organisations to fund specific social programmes. A pool of consumers must be willing and able to donate money to a specific cause in order for this tool to be relevant. Consumer donations often work best in sectors that appeal to common interests and that may receive substantial public and media attention. One successful example of this tool is Product(RED), which has partnered with a range of multinational companies to launch (RED)-branded products, including clothing, beverages, and electronics. When consumers purchase (RED)-branded products, a proportion of the profits are donated to The Global Fund to finance HIV/AIDS programmes across sub-Saharan Africa. Each partner company commits to donating up to 50% of the profits from the sale of (RED)-branded products to The Global Fund. Since its launch in 2006, Product(RED) has raised more than USD 365 million, which has been used to impact the lives of an estimated 70 million people²².

20. Africa Capital Digest, First Crowdfunded Development Impact Bond Looks for \$2.5m, <http://africapitaldigest.com/first-crowdfunded-development-impact-bond-looks-for-2-5m/>, (accessed 13 December 2016).

21. Gavi, the Vaccine Alliance, Pneumococcal AMC, <http://www.gavi.org/funding/pneumococcal-amc/>, (accessed 13 December 2016).

22. (RED), <https://red.org/>, (accessed 13 December 2016).

4. **Compulsory charges** are financial transactions made by individuals or organisations as required by regulation or law:

- **Dedicated taxes** are those levied on populations, industries, goods, or services, where the revenue raised can be earmarked for specific sectors. A “sin tax” is a type of dedicated tax levied on specific goods or services that are viewed as vices by the government. Sin taxes that are levied on common risk factors for cancer, such as tobacco and alcohol, can be an effective method of both reducing the incidence of cancer and raising revenue for investment in cancer treatment infrastructure. Many low- and middle-income countries are currently considering introducing or increasing tobacco taxes. The World Health Organization estimates that a 50% increase in tobacco tax in 22 low-income countries for which sufficient data exists would yield more than USD 1.4 billion in revenues²³. Taxes are usually levied at the national level, so for a sin tax to be relevant, the federal government must support it. For tax revenues to trickle down to the city level, there needs to be multi-level cooperation within the government system. One successful example of this tool is the Thai government's 2% surcharge on tobacco and alcohol products, the revenues from which are earmarked for the Thai Health Promotion Foundation (ThaiHealth). The sin tax raises approximately USD 120 million per year, which ThaiHealth uses to support health promotion activities including tobacco, alcohol, and substance abuse control campaigns. The initiative's success has been helped by support from senior government officials; both the Prime Minister and the Minister of Public Health sit on the Governance Board²⁴.



23. World Health Organization, Innovative Financing Solutions For Health Promotion, 2013.

24. Thai Health Promotion Foundation, <http://en.thaihealth.or.th/>, (accessed 13 December 2016).

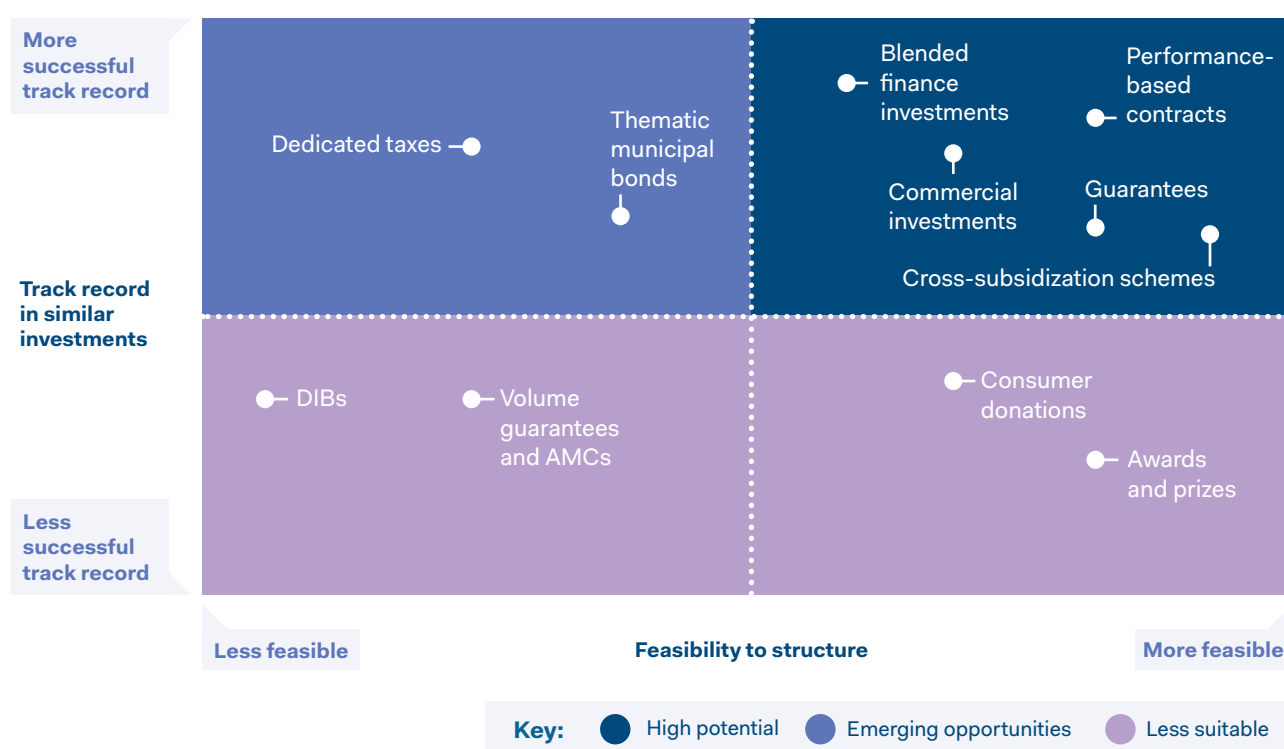
Selecting A Financing Tool For Your City

High-Potential Financing Tools For City Cancer Treatment Services

City leaders can prioritise the long list of financing tools above based on factors that are likely to be most relevant:

- Feasibility to structure:** The time and effort required to structure and launch the mechanism, as well as whether or not it is easily implemented at the city level. A highly feasible tool could be structured and launched in less than a year by the city government. A tool that scores low on feasibility is likely much more complex to structure and difficult to launch at the city level, potentially requiring significant input by national government or other stakeholders.
- Track record in similar infrastructure investments:** The past success of the tool in mobilising new streams of funding for similar investments. Tools that score highly on this composite metric have shown success in mobilizing capital at scale for health infrastructure projects or related areas in the city context.

Figure 2: Prioritisation of financing tools



Commercial investments, blended finance investments, guarantees, performance-based contracts, and cross-subsidisation schemes rank as “high potential”. All five have been used in similar projects (including the case studies discussed in the Annex) and are likely to be feasible to structure at the city level. Of the five, the first three are most often used to fund upfront investment in infrastructure while the second two are usually used to fund the ongoing costs of service delivery.

Taxes and thematic municipal bonds are promising insofar as they have a successful track record in similar infrastructure and health investments. While city leaders might still consider their use, they should be aware that these tools are likely to be more difficult to rapidly implement at the city level. A city leader considering dedicated or sin taxes or thematic municipal bonds should be prepared to invest more time in structuring the tool and building the right coalition of stakeholders early in the process.

Conversely, consumer donation, awards, and prizes are feasible to structure at the city level, but unlikely to be suitable for the types of investment desired. Consumer donations, awards, and prizes have potential insofar as they are relatively simple and require the involvement of a fewer number of stakeholders. However, they have shown less promise in the types of investments that will be needed to support cancer treatment infrastructure and are likely to be appropriate only in a very limited set of circumstances.

DIBs, volume guarantees, and AMCs are likely not suitable in most cities. They have not yet had demonstrated success in similar investments and are generally complex to structure and difficult to implement at the city level. There may, however, be exceptional cases. For example, city partners might be willing to structure and finance a pilot DIB to demonstrate impact or feasibility for cancer treatment infrastructure.

Identifying the Most Appropriate High-Potential Tool

This section outlines a high-level decision-making process that city leaders should follow when considering which financing tool(s) to select for their unique context. What works for building cancer treatment infrastructure in one city may not work in another city, and each financing tool is suited to supporting specific types of financing needs and overcoming specific challenges. When selecting a high-potential tool, city leaders should follow three steps: (i) determine their project needs, (ii) determine their constraints, and (iii) engage with investors regarding the resulting shortlisted tools (see Figure 3). Each of these steps is further discussed below. City leaders should undertake this process with the support of a team that has the necessary contextual and financial background to make informed decisions.

Figure 3: High-level overview of tool selection process for city leaders



First, a city leader should determine whether the desired project requires one-off and/or ongoing financing and whether the city wants to support public and/or private healthcare providers. Specifically, leaders should decide on:

- Use of financing: Some cities will need one-off capital to fund the construction of new treatment centres or the upgrading of existing healthcare facilities to provide a full suite of cancer treatment services. Other cities will need a steadier stream of ongoing capital to fund ongoing costs of providing improved care. Some cities will need to use multiple tools to ensure that they can raise both types of capital.
- Recipient of financing: Some cities will want to build or scale up the public healthcare system, whereas others will want to focus on private healthcare delivery, while others will want to invest in public-private partnerships for service provision. This decision will affect the channel through which the financing is directed.

Once city leaders have determined their project-level situation, additional considerations will help determine which financing tools are most appropriate. City leaders will be constrained in their choice of tool by several considerations, including:

- Required sources of financing: Some tools require multiple sources of financing, whereas some can be launched with a financing stream from just one type of actor (e.g., public, private, or philanthropic actors). The availability of different sources of funding will be affected by political will and the sophistication of local financial markets.
- Urgency of financing: Some cities will need tools that can be structured and launched quickly, with little expert knowledge and with little stakeholder engagement, whereas others will have fewer time constraints on the launch of their tools.
- Cost to city of financing: When launching a financing tool, cities may incur two types of costs: the cost of structuring, launching, and marketing the tool and the cost of capital over time (i.e., the rate of return the city must pay to any investors that provide financing). Some city leaders will have sufficient public sector resources available to cover the immediate costs of launching a tool, as well as the cost of capital, whereas others will be unwilling and/or unable to finance the launch of a costlier tool.

- Payback period of financing: Some city leaders will be able to repay outstanding financial commitments in a short timeframe, whereas others will require a longer period (e.g., >5 years) to repay any outstanding financial commitments. This may be affected by the timeframe within which the investment begins to generate sufficiently high returns.

Next, city leaders should engage in discussions with potential investors regarding tools that are identified as suitable for their situation. For a financing tool to be

successful, there must be sufficient interest from potential investors. Different investors will have different objectives regarding their investments, including different financial risk-return profiles and different expectations of social returns. Therefore, it is crucial to engage in discussions with potential investors at an early stage of tool design to make sure that these objectives are aligned and accounted for.

The following table assesses each tool against the above considerations in order to help city leaders better understand how these financing tools are suited to supporting specific types of financing needs and overcoming specific constraints. When using this

table, city leaders should first determine their project-level situation based on the use and recipient of the financing for their desired infrastructure. Looking across the relevant rows will provide an indication of which tools are more suitable for this situation (green boxes), which tools are less suitable (yellow boxes) and which tools are unsuitable (grey boxes) based on their underlying characteristics. To prioritise the remaining tools, city leaders should use the bottom section of the table to consider the constraints they face and select the tools that are most suitable for overcoming these. This table is intended to provide directional advice on which tools may be more suitable in certain situations; ultimately, however, each city should engage in a process that carefully assesses its intended projects and realistically considers its constraints to ensure that it selects the most suitable tool or tools.

Figure 3: Key considerations for tool selection process for city leaders

		Commercial investments	Blended finance investments	Cross-subsidization schemes	Guarantees	Performance-based contracts
Step 1: Project-level situations						
One-off financing for public healthcare provider		✓	✓	✗	✓	✗
One-off financing for private healthcare provider		✓	✓	✗	✓	✗
Ongoing financing for public healthcare provider		✓	✓	✓	✓	✓
Ongoing financing for private healthcare provider		✓	✓	✓	✓	✓
Step 2: Project-level considerations						
Required sources of financing	Private	✓	✓	✓	✓	✓
	Public (e.g., city leader)	✗	✓	✓	✓	✓
	Philanthropic	✗	✓	✓	✓	✓
Urgency of financing	Needs to launch tool in short timeframe	✓	✓	✓	✓	✓
	Needs little stakeholder engagement	✓	✓	✓	✓	✗
Cost to city of financing	Lacks immediate resources for structuring tool	✓	✓	✓	✓	✓
	Investment has low expected returns relative to risk	✗	✓	✓	✓	✓
Payback period of financing	Needs to repay financing over long period (>5 years)	✓	✓	✓	✓	✓

Fully suitable for situation/consideration
 Partially suitable for situation/consideration
 Unsuitable for situation/consideration

City leaders should aim to choose the most suitable tool for their given situation. To facilitate this process, and to provide clear examples of how the above table can be used, this section identifies four common situations in which city leaders might find themselves based on whether the desired project requires one-off and/or ongoing financing and whether they want to support public and/or private healthcare providers (see Step 1 in above table). For each of these situations, a high-level decision-making process is outlined that might help a city leader select the most suitable financing tool.

Situation 1: To raise one-off financing in the range of USD 5 – 25 million to upgrade existing public healthcare facilities, city leaders should consider blended finance investments or guarantees plus emerging tools such as thematic municipal bonds.

A city that does not have a dedicated cancer treatment centre, but wants to increase the availability of such services, might choose to upgrade an existing public healthcare facility so that it can provide the full suite of cancer treatment services. The most appropriate tools for this situation would be blended finance investments or guarantees, but final selection will depend on the constraints facing the city leader.

- A *blended finance investment* is more appropriate if the city leader can access public and/or philanthropic capital, and ensure that these actors are willing to work together with private investors. The city leader will also need sufficient time, expertise, and immediate financial resources to structure a blended finance investment, as they are more complex than traditional commercial investments. A blended finance investment is more appropriate if a city leader is unable to guarantee the magnitude of financing required, which will depend on the scale of financing required to upgrade the cancer treatment centre and the availability of long-term funding streams.
- A *guarantee* is more appropriate if the city leader believes that investors will be unwilling to accept certain risks, such as political instability, or expect a sufficiently large proportion of the loans within a portfolio to default. For a guarantee to be worthwhile, city leaders will likely need to attract commercial investments too, so they will need to determine whether or not they can raise sufficient private capital at the risk level provided by the guarantee.
- City leaders may also want to consider emerging opportunities such as *thematic municipal bonds*. Thematic bonds are more appropriate if city leaders believe that they won't be able to raise sufficient capital through a guarantee or blended finance investment, either because the risks are too high for commercial investors given the expected returns or because the sums required are too great. While thematic bonds are

more time-consuming and complex to launch, they may provide an opportunity to attract capital from impact investors, who seek to make both a financial and social return on their investments. It should be noted, however, that the feasibility of launching a thematic municipal bond usually depends on the ability of a city leader to obtain a formal credit rating for the city. While thematic municipal bonds may be appropriate for raising one-off capital in this situation, city leaders should be aware that this tool has not yet been applied extensively to financing health infrastructure in cities in low- and middle-income countries and tends to be used to raise much larger amounts of capital.

Situation 2: To raise one-off financing in the range of USD 10 – 50 million to build a new private cancer treatment centre, city leaders should consider commercial investments, blended finance investments, or guarantees.

A city that does not have the capacity to provide cancer treatment services within its existing healthcare system, and does not have the capacity to operate a public treatment centre in the long run, might choose to finance the construction of a private cancer treatment centre. The most appropriate tools for this situation are commercial investments, blended finance investments, or guarantees, but final selection will depend on the constraints facing the city leader:

- A *commercial investment* is more appropriate if the city leader believes that the private cancer treatment centre can generate sufficient financial returns, with sufficiently low risk, to attract private sector capital. A commercial investment would also be more appropriate for city leaders with limited public financing available because the immediate costs associated with structuring and launching blended finance investments and guarantees are substantially higher.
- A *blended finance investment* is more appropriate if the city leader believes that the private sector alone is unwilling or unable to provide sufficient capital without some of the risk being transferred to other actors. In this case, the city leader will need to have access to public and/or philanthropic capital for co-investment, and these actors must be willing to work together with private investors. The city leader will also need sufficient time, expertise, and immediate financial resources to structure blended finance investments, as they are more complex than traditional commercial investments. Given the mix of investors, however, healthcare providers will typically benefit from a longer period within which to pay back the investment.

- A *guarantee* is more appropriate if the city leader believes that investors will be unwilling to provide capital given the current risk-return profile of the investment. By issuing a guarantee, the city leader can reduce the risk of loss to private investors by ensuring that they will be paid in part or full in the case of specific circumstances such as default or political instability. Investors must believe that city leaders can access sufficient capital to bear the financial implications of the guarantee in the case of these circumstances occurring. Guarantees are also relevant if investors are concerned about risks, such as regulatory changes, that city leaders are in a position to influence.

Situation 3: To raise ongoing financing to improve the quality of cancer treatment services in existing public facilities, city leaders should consider performance-based contracts or blended finance investments plus emerging tools such as sin taxes.

Although a city may have existing cancer treatment facilities available to the public, it may want to invest in them to ensure they consistently provide high-quality cancer treatment services to patients. The most appropriate tools for raising financing in this situation are performance-based contracts, where philanthropic donors could pay for higher-quality treatments based on patient outcomes, or a blended finance investment that could be used to create a revolving credit line. A revolving credit line provides healthcare providers with a pool of capital that can be drawn upon to smooth fluctuating cash flows; for example, when there is a time lag between providing cancer treatment services and the patient/insurer paying for them. Final selection of the tool will depend on the constraints facing the city leader:

- A *performance-based contract* is more appropriate if a city leader believes that the expected financial returns are insufficient to attract private investors, but that there are philanthropic or public actors willing to pay for improvements in patient care and/or outcomes. The city leader would also need to believe that existing monitoring and evaluation systems in public facilities are sufficient, or can be easily improved, to capture the metrics required for the performance-based contracts. A performance-based contract may also be more appropriate if the city leader cannot provide public sector financing immediately. With a performance-based contract, a city needs to prove its ability to pay for verified outcomes in the future, but does not need to provide any upfront financing, unlike the case of a blended finance investment.

- A *blended finance investment* is more appropriate if the city leader believes that the returns from investing in public healthcare facilities will be large enough, when blended with public and/or philanthropic capital, to attract private investors. The city leader would also have to accept that blended finance investments are more complex and time-consuming to launch than performance-based contracts.
- City leaders may also want to consider emerging opportunities such as *sin taxes*. Sin taxes are appropriate if the city leader believes that the federal government, which has the authority to levy national-level taxes, will support the project and agree to channel a certain proportion of the revenues to the city government. While sin taxes are more time-consuming and complex to launch, they could provide a sustainable source of financing for the ongoing costs of improving the quality of public cancer treatment services by drawing on earmarked tax revenues. It should be noted, however, that the lag time between the implementation of a tax and the availability of subsequent revenues for spending may be longer than for other tools.

Situation 4: To raise ongoing financing to increase access to the private healthcare system, city leaders should consider cross-subsidisation schemes or performance-based contracts.

A city with limited capacity to deliver public cancer treatment services, both now and in the near future, might choose instead to rely on well-functioning private healthcare providers in the city. The most appropriate tools for this situation are cross-subsidisation schemes, in which the government directly subsidises treatment for low-income patients and/or incentivises private healthcare providers to change their business model, or performance-based contracts, in which the city government or philanthropic funders pay private healthcare providers based on patient outcomes. Final selection will depend on the constraints facing the city leader:

- A *cross-subsidisation scheme* is more appropriate if the city leader believes there are sufficient public resources to subsidise treatment for patients with lower ability to pay, or there is a sufficiently large pool of patients that are willing and able to pay a higher price for treatment such that patients with a lower ability to pay can receive subsidised treatment. The city leader must also believe that the current political environment favours a cross-subsidisation scheme or at least that such a proposal won't provoke an excessive adverse reaction from the public.

- A *performance-based contract* is more appropriate if the city leader believes that the expected financial returns from increasing access to the private healthcare system are not commensurate with the risk that would be borne by private investors. Instead, city leaders must be able to attract philanthropic and/or public donors that are willing to invest in private healthcare providers. The city must also determine that the monitoring and evaluation systems used by the private healthcare provider are sufficient, or can be easily improved, to capture the metrics required for the performance-based contracts and verify that the private healthcare provider has delivered the patient outcomes it claims.

As city leaders consider their unique context, it may become apparent that the project requires a combination of two or more tools. A multi-tool approach is commonly taken when there is a need to further de-risk investment. For example, USAID's DCA has provided guarantees to cities to increase the attractiveness of their thematic bonds (see [Annex for a full case study](#)). A multi-tool approach might also be taken when there are two distinct needs that cannot be addressed with only one tool. This is particularly relevant within the context of cancer treatment infrastructure, where there is a need for both expensive one-off and ongoing investments. For example, a city leader could consider a blended investment into a public-private partnership that is funded by the public sector through a performance-based contract. Ultimately, cities will need to determine whether or not a multi-tool approach reduces investor risk and/or covers additional investment needs in proportion to the additional time and costs it will take to structure. Two case studies in the Annex illustrate how tools can be used in combination: (i) Icon Group uses commercial investments to provide cancer services through a PPP agreement with the public sector that subsidises patient costs, and (ii) Deutsche Bank launched a blended Eye Fund that provided capital to hospitals that operated a cross-subsidisation business model.



Three Best Practices in Structuring and Implementing a New Financing Tool



Regardless of the financing tool selected, there are three ‘best practices’ to consider during the selection and design of the tool:

Understand the needs of your investors and their target risk-return profile

A financing tool cannot be successful or impactful without sufficient investor interest. The capital invested by all parties (including the public sector and donors) needs to meet the scale of investment required for the project to be a success. All the tools discussed in this report can theoretically unlock the scale of financing required for a “green-field” investment in cancer infrastructure. In practice, the main determinant of the level of funding raised by a tool is the level of investor interest. Most, if not all, commercial investors and private healthcare providers will be looking for a market-level return on their investment that reflects their level of exposure to risk. Public and philanthropic investors may be prepared to accept losses or below-market financial returns, provided there are clear health or social returns.

The need for financial returns can, at times, come into tension with the desire to maximise access to cancer treatment. Most city leaders that are selecting a financing tool are aiming to increase the capacity of the health system to provide cancer treatment services, be it through public or private healthcare providers. They are also likely aiming to improve the quality of healthcare provision while ensuring that it is affordable to as many of their citizens as possible. The private sector often has natural incentives to deliver more effective services and can be a crucial source of capital and expertise to city leaders. However, most tools are designed to deliver a financial return for commercial investors and/or private healthcare providers, which can limit the reach of services to those with a high ability to pay. City leaders should continue to balance and align anticipated health impact with financial returns in the design and implementation of the tool.

Early outreach to investors and early alignment on objectives and expected risk-return appetite will help align financial returns and health impact. Final choice of the tool and its structure should be based on conversations with potential investors, including commercial, development finance, and philanthropic investors. The design of the tool should reflect the different appetites for risk and return amongst investors while ensuring that capital flows to investments that improve access and equity. These design parameters will often be codified in a contract between different investors.

Identify who will pay for the ongoing cost of treatment

Infrastructure investments are likely to fail without demand from an end-payer with the willingness and ability to pay. The financing tools outlined above can increase the supply and potentially reduce the cost of high-quality treatment by increasing the capacity and efficiency of providers. However, there will always need to be demand for these services from an “end-payer” that has the ability and willingness to pay. The end-payers can be the public sector (e.g., via national health insurance schemes or subsidies for specific segments of the populations), development partners (e.g., through donor grants for commodity procurement), or private citizens (e.g., through one-off out-of-pocket or ongoing insurance contributions). For example, a guarantee could allow a private healthcare provider to access low-cost commercial financing for the one-off investment in a new cancer treatment service, but this will be successful only if there is sufficient demand from the end-payer to cover the cost of treatment on an ongoing basis. Alternatively, a performance-based contract with private healthcare providers has the potential to reduce ongoing cancer treatment costs, but the public sector or donors will continue to be the end-payer for those services.

Cities should identify a sustainable end-payer for cancer treatment services. City leaders should “sanity check” the scale and type of investment against the end-payer’s estimated ability and willingness to pay. This will ensure that city leaders invest in cancer treatment services that are commensurate with anticipated demand to pay for those services; and that therefore the infrastructure is fully utilized. In most cities in low- and middle-income countries, the majority of private citizens cannot afford the average cost of cancer treatment. This limits access to, and demand for, cancer treatment centres unless there is some form of public or philanthropic subsidy. There is significant debate about the best path towards expanding access to citizens with a lower ability to pay and increasing the utilisation of cancer treatment centres. Regardless of the decision, city leaders should work with their national government and development partners to establish an end-payer for cancer treatment infrastructure.

At the city level, partnerships between the city government and healthcare providers could ensure an end-payer for cancer treatment infrastructure.

Where national governments, development partners, or private citizens cannot be the end-payer, city leaders can use city budgets to secure demand for cancer treatment infrastructure in the public or private sector without additional funding from other stakeholders. For example, city leaders

could subsidise the cost of treatment at public or private cancer treatment centres by providing voucher payments to patients. The case studies in the Annex provide examples of how this can work in practice.

Build capacity to structure financial tools & engage the private sector

Successful build-out of cancer treatment infrastructure will require financial expertise as well as coordination and collaboration with the private sector. The tools described in this report require additional financial expertise compared to traditional, single-source forms of financing. They often require a more nuanced understanding of risks and returns, as well as greater experience in structuring and implementing financial tools. In addition, nearly all the tools described require some form of engagement between the city government and the private sector. In some cases, this will be “light-touch” engagement to ensure coordination and referrals between the public and private health systems. In others, city leaders may need to review policy and regulation at the city level to allow the private sector to invest and deliver healthcare services efficiently. For many of the tools described, there will be some form of contractual PPP arrangement between the public and private sector.

City governments will need to build capacity to structure financial instruments, as well as negotiate and finalise contracts with the private sector. Many cities do not currently have the necessary technical, financial, legal, and contractual expertise to structure a financial tool in the health space. Similarly, deals between the public and the private sector require a range of expertise that is rarely available for individual health investments. Cities may be able to contract expertise on a one-off basis or else seek assistance from development partners with experience in structuring financial products and/or public-private partnerships. For some cities, there may be a case for investing in longer-term capacity at the municipal level to handle PPP deals across a range of health infrastructure projects, or infrastructure development more broadly. This capacity could take the form of a “PPP unit” which handles the end-to-end process for large-scale infrastructure investments, such as cancer treatment centres. For example, Johannesburg’s Municipal Infrastructure Investment Unit has had success as a non-profit corporation providing technical and financing assistance to cities looking to access private financing and expertise. It has provided assistance on 230 projects leveraging approximately USD 700 million in private sector investment²⁵.

25. United States Agency for International Development, Municipal Infrastructure Investment Unit Final Completion Report, 2006.

Next Steps



This report focuses on the financing tools available to city leaders and suggests that tools must be chosen depending on the opportunities and constraints faced by city leaders. This is only one part of the process that city leaders will follow. It does not fully address the actions and investments needed by all the types of stakeholders that make up C/Can 2025. This section provides a brief, high-level overview of the next steps for city leaders, national governments, the philanthropic sector, the private sector, and civil society.

City leaders

City leaders will be the driving force behind building out cancer treatment infrastructure in cities; they will need to embrace the role of champion and coordinate across multiple stakeholders. As city leaders begin to consider financing their cancer treatment infrastructure, they should consider:

- **Establishing the “infrastructure need” in consultation with the Ministry of Health, healthcare providers, and other experts.** City leaders will need to diagnose the gap between existing and target cancer treatment infrastructure. In order to support and guide city leaders and policy makers, the UICC and its partners have outlined in “Guiding Principles for Quality Cancer Treatment Services in Cities” a core package of interventions for the delivery of a quality cancer solution at the city level.²⁶ Cities will need to put a team with the right technical expertise in place to identify the gap and the most cost-effective way to build and operate the required infrastructure within the existing health system (e.g., expansion of existing facilities, construction of new cancer centres, etc.).
- **Determining the financing approach in collaboration with potential public, private, and philanthropic investors.** Once they have identified the infrastructure need, city leaders can start considering the tools available to finance that need. This report highlights that the situation (i.e., need for upfront vs. ongoing financing, desire to use public vs. private healthcare providers) and the constraints facing the city (e.g., urgency of financing, cost of financing to city, etc.) will ultimately drive the choice of financing tool. A diagnosis of these factors, including an early assessment of investor interest (private, public, and philanthropic)

26. Union for International Cancer Control, C/Can 2025: City Cancer Challenge Guiding Principles for Quality Cancer Treatment Services in Cities

and their motivations (e.g., risk-return appetite, etc.), will help determine the best tool. City leaders should prioritise early outreach to potential investors by a person or team that understands the financing tools and has experience structuring public-private partnerships.

- Advocating for increased public and donor funding for cancer treatment. None of the tools described in this report should be considered a “silver bullet” for providing free or affordable cancer treatment. The one-off investment in cancer infrastructure, if not purely commercial, will require public or philanthropic funding. Regardless of whether the final healthcare provider is public or private, there will likely need to be some ongoing subsidisation by the public or philanthropic sector if the final costs of treatment are not to be borne by private citizens. City leaders may be well placed to make the case to donors and regional or central governments for increased funding for cancer.

National Governments

National governments, including the ministries of health and finance, will play an important role in supporting cities in developing and financing cancer treatment infrastructure. They should consider:

- **Supporting cancer treatment through increased public investment.** This investment could be direct investment in the one-off or ongoing costs of treatment or in the broader cancer treatment ecosystem. In many countries, national health budgets are used to provide free or subsidised treatment costs (including through subsidised insurance schemes), which could be expanded to partially or fully pay for treatment costs in cancer treatment centres. More broadly, national governments could increase investments in the screening and diagnosis of cancer. Public investment in human capacity and information systems will also be crucial to the success of city-level cancer treatment infrastructure.
- **Easing constraints on private healthcare providers.** In many countries, policies that reduce access to finance (including foreign exchange), urban land, human capacity, procurement systems, and broader infrastructure (e.g., reliable supply of electricity, internet, etc.) can effectively increase the costs of private healthcare provision²⁷. These additional expenses are usually passed on to patients, increasing costs for those using the private sector and increasing the burden on public sector budgets where there are PPP arrangements with private healthcare providers. Some governments also provide financial incentives (e.g., tax holidays) to private healthcare providers to encourage the development of private infrastructure.
- **Strengthening the capacity to partner with the private sector.** Policy, regulations, and action at the national level can support partnerships at the city level. These can range from developing an effective PPP policy to ensuring information sharing and referrals between public and private healthcare systems. Investing in a PPP unit at the national level can also reduce the burden on cities that are planning to craft partnerships with the private sector and could lead to greater efficiencies of scale at the national level.

Philanthropic Sector

Development partners, including bilateral donors, multilateral donors, and private foundations, can both support more innovative financing models and provide technical support to cities. They should consider:

- **Supporting cancer treatment infrastructure in “early-mover” cities.** Private foundations, in particular, should consider the value of supporting cities that are early movers in developing cancer treatment infrastructure in low- and middle-income countries. This support may take the form of one-off investments (e.g., first-loss financing for a blended financing investment) or of grants to private healthcare providers to implement lower-cost models (e.g., cross-subsidisation schemes). This type of support often builds a case for increased public or donor financing.
- **Increasing the flow of donor funding to cancer infrastructure.** Bilaterals and multilaterals, in particular, should consider increasing their funding for cancer treatment to ensure that the expansion of city cancer treatment reaches scale. The targets outlined in the SDGs on NCDs are unlikely to be met through investment by the public and private sectors alone. This support could take the form of concessionary financing for large one-off investments or ongoing subsidisation of treatment (e.g., through performance-based contracts).
- **Supporting cities in building financial and PPP capacity.** A selection of bilaterals and multilaterals have a long track record of structuring financial tools and public-private partnerships. This institutional expertise could be “transferred” to city leaders through training or secondments. Other donors may consider funding and facilitating the transfer of knowledge between cities participating in C/Can 2025 or from the private sector to city leaders.

27. Dalberg interviews and analysis.

Private Sector

Private sector stakeholders, including both commercial investors and private sector healthcare providers, can help provide financing and operational support for cancer treatment infrastructure. They should consider:

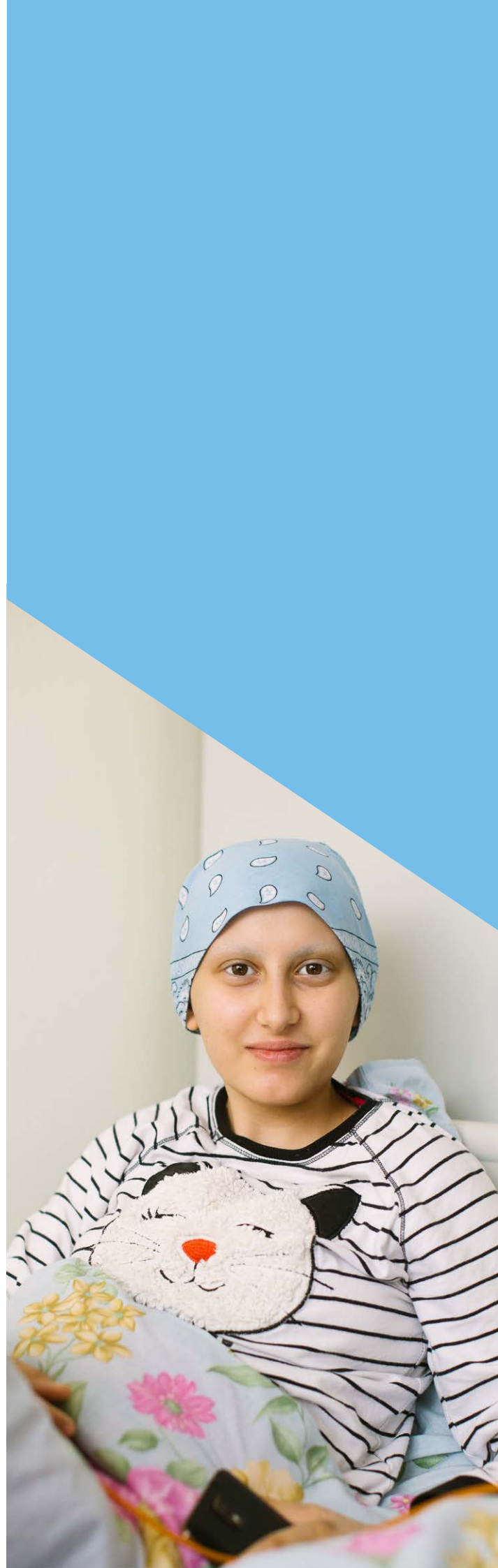
- **Exploring opportunities and partnerships to expand commercial investment in cancer treatment.** Commercial investors should explore opportunities to finance healthcare providers that are serving patients in cities in low- and middle-income countries. Commercial investors should explore opportunities to partner with the public sector, proactively identifying areas of mutual benefit—for example, through a blended finance approach. Larger private healthcare providers often contribute capital from their “balance sheet” for one-off investments in private or public-private facilities.
- **Partnering with city leaders to improve access to private healthcare services.** Private healthcare providers should explore innovative ways to profitably serve customers with a lower ability to pay (e.g., through cross-subsidisation models, etc.). Partnerships with the public sector may be an opportunity to expand access to private healthcare services—for example, through a PPP arrangement that subsidises patients using the private system.

Civil Society

Finally, local and international civil society organizations can help advocate for cancer treatment infrastructure and should consider:

- **Increasing the flow of philanthropic funding to cancer care.** Civil society can bring an additional source of philanthropic financing to the cancer treatment space and can be involved in providing free or low-cost healthcare services.
- **Supporting change in cities.** Civil society can play a central role in representing the needs of the city population to city leaders, providing a mandate for change in policy and regulation at the city level. Civil society can also lead or support efforts to educate and inform city populations on cancer control, from prevention and diagnosis to treatment.

Together, city leaders, national governments, philanthropic donors, private investors and healthcare providers, and civil society have the power to transform cancer treatment in cities across low- and middle-income countries.



Annex: Case Studies On High-Potential Tools



This annex provides case studies of projects that have used the five high-potential financing tools outlined in this report. The case studies have been selected because they highlight the application of each tool to financing health infrastructure or the expansion of health services. These case studies are intended to provide city leaders with insights on how these financing tools can be applied in practice and the key considerations that will be critical in their application.

Commercial Investments: Icon Group Integrated Cancer Centres

Snapshot²⁸

- **Financing tool(s):** Commercial investments (debt and equity)
- **Funding mobilised:** USD 8-15 million in one-off investment per cancer centre, plus USD 6-8 million for ongoing costs
- **Source of financing:** Private banks/investors and Private equity
- **Recipient of financing:** Private healthcare providers
- **Geographies:** Australia, China, Myanmar, New Zealand, Singapore, Vietnam
- **Inception:** 2015

Overview of financing tool

Icon Group uses commercial investments, including a mix of debt and equity, to finance the construction and operation of private cancer treatment facilities across the Asia-Pacific region. In some cases, Icon Group uses commercial loans to finance the one-off costs of building the facility. In other cases, they enter equity partnerships with local property developers or doctors who purchase an ownership stake in the facility in return for a lump-sum capital payment. The specific mix of debt and equity is tailored to the context of each new cancer treatment facility.

Icon Group has combined their commercial investments with a PPP approach to operating some of their cancer treatment centres. These PPPs can take several forms depending on the objectives of each partner and their access to capital. In some cases, Icon Group (or another private sector partner) will bear the financial risk of constructing the cancer centres and purchasing medical equipment. Partner state governments may then provide co-payments to Icon Group for patient treatment to ensure broader and more equitable access to cancer treatment for their citizens. In other cases, such as the model adopted by Icon Group in Queensland, Australia, the partner state government bears the financial risk of construction and purchasing medical equipment. The management and operation of the centres is then outsourced to Icon Group, and the state government provides a co-payment for patient treatments to ensure the viability of the

service. Icon Group achieve economies of scale across their operations that help ensure that this remains a cost-effective way for state governments to provide cancer treatment to their population.

Source of financing

Icon Group's investors and co-investors are typically domestic banks, institutional investors, other private healthcare providers, and private property developers. For example, in New Zealand, Icon Group has partnered with Acurity Health Group, a private healthcare provider, to invest AUD 20 million (c. USD 15 million) in upgrading the facilities in an existing private hospital to include a new cancer care centre²⁹. As part of their PPP approach, partner state governments may also provide financing to cover either the one-off costs of building cancer infrastructure or the ongoing costs of cancer treatment for lower-income patients.

Recipient of financing

Icon Group uses this external financing to construct and operate their private cancer treatment facilities, often in collaboration with property developers. They require approximately AUD 10-20 million (c. USD 8-15 million) in one-off investment to launch a new cancer centre, plus approximately AUD 8-10 million (c. USD 6-8 million) each year to cover ongoing costs, depending on the size and capability of the cancer centre. Icon Group has used commercial investments to launch three integrated cancer centres in Australia and four day hospitals and outreach clinics in Singapore, Vietnam, and Myanmar, as well as continuing to expand their presence across the Asia-Pacific region. Through these cancer centres, Icon Group screens, diagnoses or treats more than one million patients each year.

Process to launch

Prior to launching a new integrated cancer centre, Icon Group engages with local stakeholders, including city governments, to determine their specific needs with respect to cancer treatment services. This process is also used to raise awareness among city leaders of public-private partnerships and their ability to share the risks and costs of delivering cancer treatment and care. In addition to conducting needs assessments, Icon Group sometimes works to educate government actors on PPP approaches. They often partner with local property developers to finance and construct new cancer treatment centres. In addition, Icon Group must purchase the necessary medical equipment, hire specialised staff and market their new services. The entire process of opening an integrated cancer centre, from conception to launch, takes approximately 24 months³⁰.

28. Icon Group, <http://icongroup.global/about/>, (accessed 13 December 2016).

29. Icon Group, Icon Group and Acurity Health Group announce partnership to deliver Wellington's first comprehensive private cancer centre, <http://icongroup.global/2016/07/01/icon-group-and-acurity-health-announce-partnership/>, (accessed 13 December 2016).

30. Timeline based on historical experience of launching an integrated cancer centre (from Commonwealth approval to clinical commencement) in Revesby, Sydney.

Key considerations when selecting this model

- In order to attract commercial investment, projects must be able to prove they can generate a sufficient financial return. Commercial investors judge different investments based on their risk-return profile. Investments in cancer treatment infrastructure should be able to generate expected financial returns that are commensurate with the level of risk borne by the investor. Commercial investors will typically expect a market-rate return from their investments. If the expected returns are insufficient, then investors are unlikely to provide capital without additional risk-reduction mechanisms such as guarantees or co-investment by public or philanthropic actors through blended finance investments. Icon Group achieves this by focusing on the functional design of their cancer centres within the broader health infrastructure system of a city. Early engagement with city leaders ensures that Icon Group provides only those cancer treatment services that are needed. This increases the efficiency of their service delivery, thereby reducing costs and ensuring their cancer centres generate sufficient financial returns for their commercial investors.
- To ensure access for patients across the income spectrum, the government may need to create a public-private partnership structure that subsidises the costs of cancer treatment. The high costs of building private cancer treatment centres and purchasing medical equipment, such as linear accelerators, can often lead to high costs of care for patients. To ensure that patients can access cancer treatment, regardless of income level, and to ensure there is sufficient demand for services to make the investments financially viable, city governments may consider engaging in a PPP with private healthcare providers. Several Australian state governments have established PPPs with Icon Group where they provide co-payments for patient treatment in return for Icon Group bearing the financial risks of establishing cancer centres. For some city leaders, this can provide a cost-effective method for providing high-quality cancer care to their population.



Blended finance investments: Deutsche Bank Eye Fund 1

Snapshot

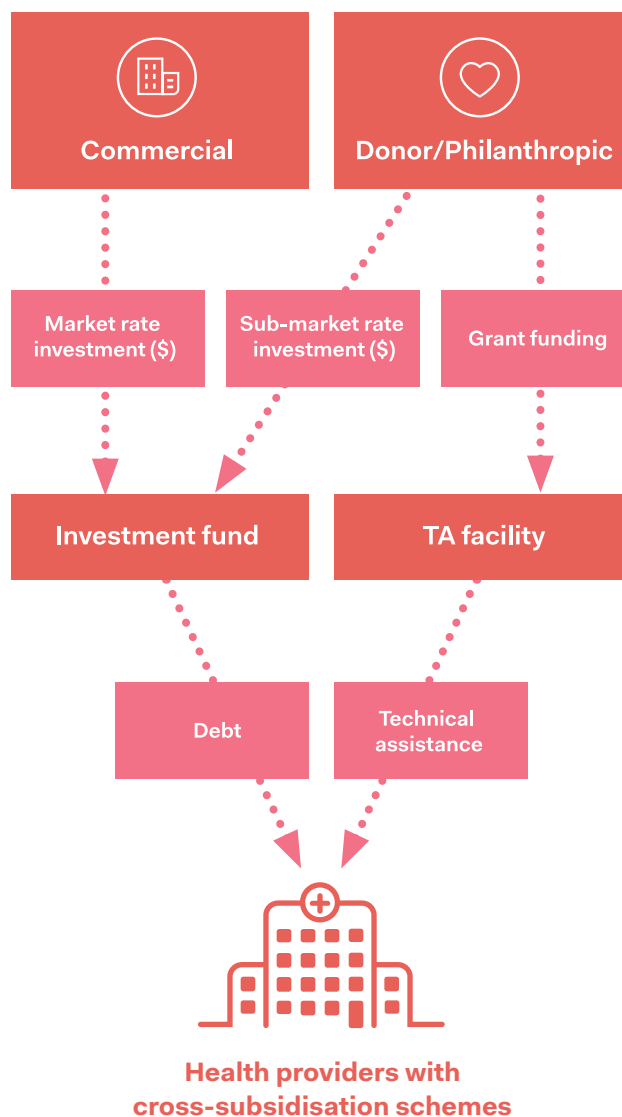
- **Financing tool(s):** Blended finance investment (into cross-subsidisation schemes)
- **Funding mobilised:** USD 14.48 million
- **Source of financing:** Public, Private, and Philanthropic
- **Recipient of financing:** Private and Public-Private healthcare providers
- **Geographies:** China, Nigeria, Paraguay
- **Inception (term):** January 2010 (7 years)

Overview of financing tool

The Eye Fund I was structured and launched by Deutsche Bank, in collaboration with Ashoka and the International Agency for the Prevention of Blindness (IAPB) who advised on the recipient eye care service providers. It is a blended finance investment with capital provided by private investors, philanthropic foundations and development finance institutions. The mix of differently motivated investors allowed the fund to provide lower-cost debt to eye care providers while still attracting commercial investors.

A Technical Assistance (TA) Facility was also launched by IAPB to transfer management expertise and best practices from the Aravind Eye Care System in India to recipient eye care providers. Aravind pioneered a tiered-pricing model, where higher income patients subsidise the treatment costs of lower-income patients, thereby increasing access.

Figure 5: Eye Fund I structure



Source of financing

The Eye Fund blended finance from private investors, philanthropic foundations and development finance institutions. This mix of investors have different appetites for risk and financial return, which enabled the Eye Fund to structure four different tranches of debt with different risk-return profiles. This approach helped the Eye Fund to mobilise additional capital from private investors that may not have previously considered investing in this sector.

In total, the Eye Fund attracted investment of USD 14.48 million, against a capitalisation target of USD 20 million:

- Senior debt had 84% first-loss protection and a projected return of 1.4%
- Subordinated loans and debt had returns of 3.6% and 2%, respectively
- Equity investments received a 1% rate of return³¹

This mix of investment options attracted a mix of private, public and philanthropic investors:

Investor ³²	Investor type	Amount (USD)
Storebrand	Private	Undisclosed
SPP Livförsäkring AB	Private	Undisclosed
AFD (France)	Public	Undisclosed
OPIC (USA)	Public	5,090,000
Bernard A. Newcomb Foundation	Philanthropic	Undisclosed
COFRA Foundation	Philanthropic	Undisclosed
Janet A. McKinley	Philanthropic	Undisclosed
Deutsche Bank Americas Foundation	Philanthropic	1,000,000
Total		14,480,000

In addition, a Technical Assistance Facility of USD 1,500,000 was funded by The Netherlands Development Finance Company (FMO), Lavelle Fund and the Goodman Family Foundation, with the aim of transferring management expertise and best practices from the Aravind model to recipient eye care providers.

- The He Eye Hospital in Shenyang, China received a USD 7 million loan to build three community hospitals and to expand the base hospital in Shenyang
- Fundación Visión in Asunción, Paraguay received a USD 250,000 loan to complete construction of a medical institute and increase the number of consultation rooms³⁴

Recipient of financing

The Eye Fund provided blended finance loans for one-off investments in eye care infrastructure to three private and public-private healthcare providers in Nigeria, China, and Paraguay. The financing was used to construct five specialised eye care hospitals, upgrade existing facilities, and purchase specialised equipment. In total, this created capacity for an additional ~30,000 sight-restoring surgeries each year³³. Specifically:

- The Eye Foundation Hospital in Lagos, Nigeria received a USD 7 million loan to build two specialised hospitals and to purchase new equipment for sub-speciality units

The Eye Fund carefully selected recipient eye care providers who were committed to increasing the affordability of their eye care services through a cross-subsidisation model, which was pioneered by the Aravind Eye Care System³⁵. This meant the Eye Fund could ensure an increase in the capacity of the private healthcare system, while also increasing equity of access. Approximately 55% of treatments and surgeries carried out by the three recipient eye care providers are provided for free or at a subsidised price for lower-income patients³⁶ (see the case study on salaUno for more details on how the cross-subsidisation model has been applied).

31. Deutsche Bank, Eye Fund 1 Overview, [https://www.db.com/usa/docs/Eye_Fund_I_Profile\(1\).pdf](https://www.db.com/usa/docs/Eye_Fund_I_Profile(1).pdf), (accessed 13 December 2016).

32. Convergence Finance, Deal Database: Deutsche Bank Eye Care Fund, <https://www.convergence.finance/sample-deal/449?tab=structure>, (accessed 13 December 2016).

33. Deutsche Bank, Eye Fund 1 Overview, [https://www.db.com/usa/docs/Eye_Fund_I_Profile\(1\).pdf](https://www.db.com/usa/docs/Eye_Fund_I_Profile(1).pdf), (accessed 13 December 2016).

34. Deutsche Bank, Eye Fund 1 Presentation, 2009, <http://www.fininnov.org/img/pdf/10%20Eye%20Fund.pdf>, (accessed 13 December 2016).

35. UK Government Cabinet Office, Achieving social impact at scale: Case studies of seven pioneering co-mingling social investment funds, 2013.

36. OPIC, OPIC Partners Pay Back: The Eye Fund, 19 April 2016, <https://www.opic.gov/blog/opic-in-action/opic-partners-pay-back-the-eye-fund>, (accessed 13 December 2016).

Process to launch

The Eye Fund was structured and launched by Deutsche Bank, in collaboration with Ashoka and IAPB. The concept of a blended investment fund for eye care was first proposed at the Clinton Global Initiative in September 2006³⁷. The structuring process took just over three years, and the Eye Fund I was officially launched in January 2010³⁸. The Eye Fund was the first fund to be created for the eye care industry and this process has helped to raise awareness about the concept among stakeholders³⁹. It is estimated that a similar fund could now be structured in 9-12 months⁴⁰.

Key considerations when selecting this model

- A blended fund can “crowd in” new commercial funders by blending their capital with other sources of capital that expect a lower return. Different actors typically have different appetites for risk and financial return in their investments. The Eye Fund leveraged these differences and structured four tranches of debt that offered different risk-return profiles. This ensured the Eye Fund was attractive for commercial investors that would not typically invest in this sector.
- A blended fund can increase equitable access through careful choice of investees. Concessional debt financing can increase capacity in a health system but does not necessarily result in more affordable or higher quality infrastructure. The Eye Fund addressed this issue by carefully selecting recipient eye care providers and providing them with technical assistance to encourage the use of an innovative cross-subsidisation business model that increases access to private sector healthcare.
- A blended fund requires a committed coalition. Building and launch a blended investment fund can take several years. The Eye Fund took longer than expected to launch and did not fully meet its capitalisation target. However, the Eye Fund was an early mover and the concept is now better understood. Assembling a coalition of interested parties for both the concessional and commercial funding and identifying a fund manager early on in the process is key to success.



37. Deutsche Bank Press Release, Deutsche Bank to launch Investment Fund supporting Eye Care Hospitals in Developing Countries, 22 September 2006, https://www.db.com/presse/en/content/press_releases_2006_3194.htm?month=4, (accessed 13 December 2016).

38. Deutsche Bank, Eye Fund 1 Overview, [https://www.db.com/usa/docs/Eye_Fund_Profile\(1\).pdf](https://www.db.com/usa/docs/Eye_Fund_Profile(1).pdf), (accessed 13 December 2016).

39. Deutsche Bank, Eye Fund 1 Overview, [https://www.db.com/usa/docs/Eye_Fund_Profile\(1\).pdf](https://www.db.com/usa/docs/Eye_Fund_Profile(1).pdf), (accessed 13 December 2016).

40. UK Government Cabinet Office, Achieving social impact at scale: Case studies of seven pioneering co-mingling social investment funds, 2013.

Guarantee: USAID DCA Guarantee For Expansion Of Private Healthcare Provider In India

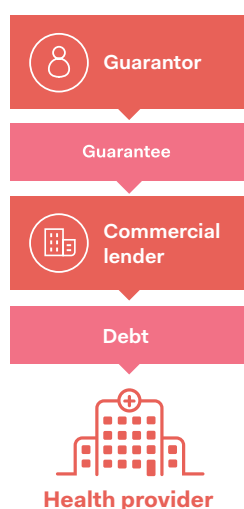
Snapshot^{41,42,43}

- **Financing tool(s):** Guarantee on commercial investment
- **Funding mobilised:** USD 9 million (using guarantee of USD 4.5 million)
- **Source of financing:** Public (guarantor), Private (lender)
- **Recipient of financing:** Private healthcare provider
- **Geographies:** India
- **Inception (term):** March 2016 (9 years)⁴⁴

Overview of financing tool

The United States Agency for International Development (USAID) Development Credit Authority (DCA) is the largest player offering guarantees in the health market. The DCA offers four standard products: (i) loan guarantees for an identified lender and borrowing enterprise; (ii) portable guarantees for an individual borrowing enterprise and an unidentified lender; (iii) loan portfolio guarantees for an identified lender to serve a group of borrowing enterprises in a specific sector; and (iv) bond guarantees for an institution issuing bonds.

Figure 6: DCA loan guarantee structure



By issuing a guarantee, USAID DCA transfers some of the default risk away from lenders and provides partial protection against potential financial losses. The DCA target their support to enterprises that face issues in accessing finance, such as being refused sufficient credit or being offered unfavourable borrowing terms. Unfavourable terms faced by borrowing enterprises can include high collateral requirements, short loan terms, high interest rates and other characteristics which raise the risks or costs of lending. In this case study, a DCA guarantee unlocked commercial investment for a private healthcare provider that was unable to access sufficient levels of capital. USAID's knowledge of the sector and their detailed assessment of borrowing enterprises can make it possible to manage the default risk more efficiently than banks, particularly if banks are unable or unwilling to invest in understanding and assessing the risk profile of a specific borrowing enterprise.

Source of financing

The DCA provided a loan guarantee to RBL Bank Limited (RBL), a private Indian bank, on a loan they issued to Wellspring Healthcare Private Limited (Healthspring). RBL provided USD 9 million of debt financing to Healthspring, and the DCA provided a 50% (USD 4.5 million) guarantee on the loan principal. The DCA's guarantee was backed by the "full faith and credit of the US Treasury", such that if Healthspring was unable to repay their loan, then the DCA would be liable for principal losses up to the value of USD 4.5 million.

Recipient of financing

Healthspring, a private healthcare provider in India, received a USD 9 million loan from RBL. Healthspring rents and operates a network of family health clinics using a low-cost, high-volume business model. The loan was used to finance the one-off costs of scaling their operations from 30 to over 150 health clinics, including in new cities such as Pune, Hyderabad and New Delhi⁴⁵.

Process to launch

USAID identified Healthspring as a high-potential enterprise for increasing access to primary healthcare in India based on their success in providing high quality, affordable care. As global health is one of USAID's priority sectors, they worked with Healthspring to identify the barriers to their expansion and assess their current access to capital for scale-up. Based on this assessment, USAID identified a DCA guarantee as an impactful tool for unlocking commercial debt financing for Healthspring. USAID and Healthspring identified RBL as a potential lender and negotiated terms based on the standard DCA guarantee offering.

41. United States Agency for International Development, U.S. Steps Up as Loan Guarantor for Expanding India's Primary Healthcare Network, 3 March 2016, <https://www.usaid.gov/india/press-releases/mar-3-2016-us-steps-loan-guarantor-expanding-indias-primary-healthcare>, (accessed 13 December 2016).

42. United States Agency for International Development, Development Credit Authority, Putting Local Wealth to Work, Accessed December 2016.

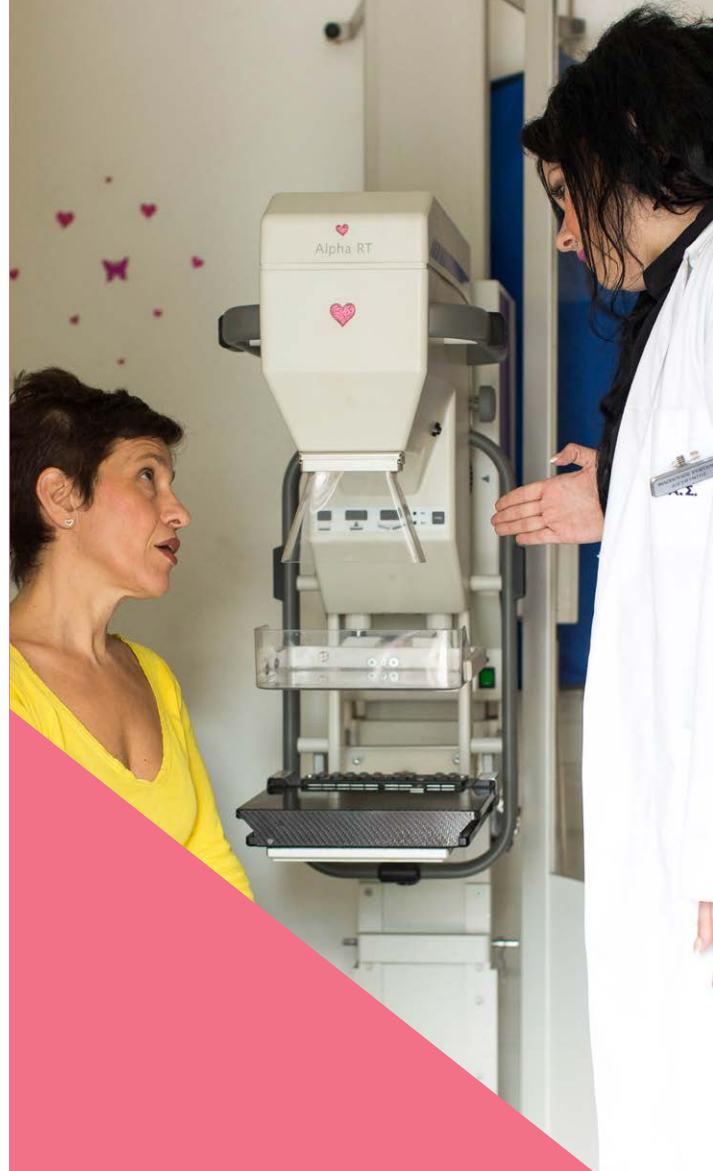
43. United States Agency for International Development, Bringing New Life to Healthcare, 2016.

44. Conversation with USAID DCA, December 2016.

45. Conversation with USAID DCA, December 2016.

Key considerations when selecting this model

- Guarantees can “unlock” private investment into health infrastructure by reducing investor risk and/or improving the terms of financing for borrowing enterprises. The DCA can mobilise new or lower cost financing for health infrastructure, without incurring significant costs. By transferring some of the lending risk to the DCA through a guarantee, they can unlock financing for investments that private investors initially deem as too risky. Guarantees can also improve the terms of financing for borrowing enterprises, making it feasible for them to borrow capital (e.g., extending repayment periods, reducing collateral requirements, lowering interest rates, etc.). First, the guarantor must believe that the enterprise will be profitable to the extent that they could repay the debt under normal circumstances. Next, an early diagnosis of the target borrowing enterprise's access to finance can demonstrate the need for a guarantee. This can avoid situations where resources are used to set up a guarantee for a borrowing enterprise, only for the lender not to require one to provide investment.
- Guarantees can boost equitable access, particularly through careful choice of funding recipients. Guarantees unlock debt and equity financing but do not, on their own, determine how that funding is used. In many cases, increasing access to finance for healthcare providers might be expected to result in investments that increase capacity, increase quality and/or lower costs for patients. For example, a DCA guarantee on a portfolio of debt held by Nigerian private healthcare companies, selected by the lender rather than USAID, resulted in the scale up of existing healthcare providers and increased access in 80% of facilities. However, the impact on equitable access can be magnified by choosing funding recipients that have demonstrated social, as well as financial, returns.
- Guarantees are not possible without a highly secure source of public or donor financing. For a guarantee to be effective, the guarantor themselves must represent little or no risk of default to the lender. For example, DCA issues guarantees that are backed by the United States Treasury. City governments may not have access to similarly secure forms of public finance. This means that many city leaders would need a national or donor government to issue the guarantee. Early negotiation with potential guarantors is crucial in determining whether a guarantee is an appropriate tool for building out city-level cancer infrastructure.



Cross-Subsidisation Scheme: salaUno Eye Care Centres

Snapshot

- **Financing tool(s):** Cross-subsidisation scheme
- **Funding mobilised:** N/A (ongoing operating costs of approximately USD 2.3 million per year⁴⁶)
- **Source of financing:** Mainly private individuals (with some public and philanthropic subsidisation)
- **Recipient of financing:** Private healthcare provider
- **Geographies:** Mexico
- **Inception:** 2011

Overview of financing tool

SalaUno is a for-profit social enterprise that provides high-volume, high-quality eye care services in Mexico through a cross-subsidisation model. They offer a tiered pricing system which allows higher-income patients to pay a higher price for certain services and amenities. For example, patients can choose the type of recovery room, the waiting time for surgery, the type of lens they desire, etc.⁴⁷ These additional revenue streams are used to subsidise the costs of treatment for patients with a lower ability to pay.

SalaUno has adopted best practices from the Aravind Eye Care System in India, which successfully pioneered the cross-subsidisation model in the eye care sector. Through Aravind's tiered-pricing model, higher income patients subsidised the treatment costs for lower-income patients, thereby increasing access to affordable cataract surgery.

Source of financing

Patients with a higher ability to pay subsidise the treatment costs of patients with lower ability, by self-selecting into the purchase of additional services and higher quality amenities. Typical price ranges for a suite of salaUno's services and products are provided below.

Figure 7: Tiered pricing options for SalaUno services (2012)⁴⁸

Service / Product	Price Range (USD)
Check-up	\$1.75 - \$3.50
PHACO cataract surgery	\$705 - \$1,740
SICS cataract surgery	\$415 - \$1,285
Retinopathy	\$60 - \$100
YAG laser	\$105 - \$330
Pterygium removal	\$300 - \$580
Optical services	\$75 (average)
Pharmacy products	\$10 - \$30

SalaUno also receives funds directly from the Mexican government and NGOs to subsidise the costs of some cataract surgeries, including the Cinépolis Foundation which directly subsidises approximately 100 surgeries per month^{49,50}.

SalaUno's co-founders used their own capital to launch their first SalaUno eye care clinic in the cross-subsidisation model. A subsequent USD 250,000 grant from the Inter-American Development Bank helped them to expand the model, support capacity-building services and market their services⁵¹.

Recipient of financing

The direct beneficiaries of the cross-subsidies are patients with a lower ability to pay for eye care treatment. SalaUno treats almost 35,000 patients each year⁵², with approximately 70% receiving surgery for free via cross-subsidisation or direct subsidisation by the Mexican government and NGOs⁵³.

Process to launch

Prior to launch, SalaUno's two co-founders spent several weeks in India, studying how the Aravind Eye Care System operated. Upon moving to Mexico City, they attempted to replicate the approach of the Aravind Eye Care System. It took five months to construct the first clinic, establish the necessary local and international relationships, and recruit staff. To build demand for their services, SalaUno conducted community outreach activities, and benefited from free media coverage funded by local NGOs⁵⁴.

46. Schwab Foundation for Social Entrepreneurship, Profile: salaUno Founder, Carlos Orellana Aguilar, <http://www.schwabfound.org/content/carlos-orellana-aguilar>, (accessed 13 December 2016).

47. International Partnership for Innovative Healthcare Delivery, Replicating Indian Eye Care Innovations in Mexico: The Founding and Expansion of salaUno, 2013.

48. International Partnership for Innovative Healthcare Delivery, Replicating Indian Eye Care Innovations in Mexico: The Founding and Expansion of salaUno, 2013.

49. Forbes, A Chance to See is a Chance at Life: The Case of salaUno in Mexico, September 2013.

50. International Partnership for Innovative Healthcare Delivery, Replicating Indian Eye Care Innovations in Mexico: The Founding and Expansion of salaUno, 2013.

51. Forbes, A Chance to See is a Chance at Life: The Case of salaUno in Mexico, September 2013.

52. Schwab Foundation for Social Entrepreneurship, Profile: salaUno Founder, Carlos Orellana Aguilar, <http://www.schwabfound.org/content/carlos-orellana-aguilar>, (accessed 13 December 2016).

53. Forbes, A Chance to See is a Chance at Life: The Case of SalaUno in Mexico, September 2013.

54. International Partnership for Innovative Healthcare Delivery, Replicating Indian Eye Care Innovations in Mexico: The Founding and Expansion of salaUno, 2013.

Key considerations when selecting this model

- The success of a cross-subsidisation model relies on the existence of a pool of higher-income patients that are willing and able to subsidise the healthcare of others; without this, additional subsidisation by public or philanthropic donors might be required. The entire cross-subsidisation model depends on the willingness of one actor to subsidise the treatment of another. As most patients are unlikely to want to pay a higher price for treatment than others, it is common for healthcare providers that use a cross-subsidisation model to offer additional amenities for an additional price. This allows patients with the ability to pay to self-select into purchasing additional services, thereby generating revenues to subsidize treatment costs for those patients who only want the base level of treatment. SalaUno tries to ensure there is demand from a large pool of higher-income patients by providing a high quality of care that can be improved with the purchase of additional amenities and services. They also conduct significant community outreach to ensure they have sufficiently large patient numbers to cover the high fixed costs of eye surgery. However, SalaUno have still had to develop relationships with local foundations and governments, who are willing to subsidise the treatment costs of a certain number of low-income patients.
- If healthcare providers want to charge patients different prices for the same service, they must be able to segment patients based on income levels. Some cross-subsidisation models, such as those operated by SalaUno, rely on patients self-selecting to purchase more expensive services. An alternative model is to charge patients different prices based on their ability to pay. This kind of price discrimination requires accurate means testing of patients, which can be difficult and controversial. If healthcare providers are unable to determine the income levels of patients, then high-income patients may self-select into paying a lower price for treatment, making the model difficult to enforce.
- Cross-subsidisation models may struggle to operate profitably in a competitive environment. Higher-income patients may choose to purchase healthcare services from a different private sector provider, if they can provide the service at a lower price than the cross-subsidising model. In this situation, a cross-subsidisation model becomes difficult to maintain. SalaUno has tried to overcome this issue by ensuring that all patients feel like they are getting value-for-money. Patients that pay more feel like they are benefitting from a better experience, for example through more comfortable recovery rooms or shorter waiting times. This has also helped to reduce any possible feelings of resentment towards patients that may receive similar quality care but for a lower price.
- While subsidising the costs of treatment is critical for increasing the availability of treatment, there may be additional costs that prevent lower-income patients from accessing treatment. SalaUno found that even when they provided free eye care treatment services, some patients still did not seek diagnosis and treatment. Additional opportunity and transport costs remained major barriers to access for lower-income patients. To overcome this, SalaUno covers the costs of food and transportation for low-income patients identified through their outreach activities.

Performance-Based Contracts: Rwanda Health Sector Reform

Snapshot^{55,56}

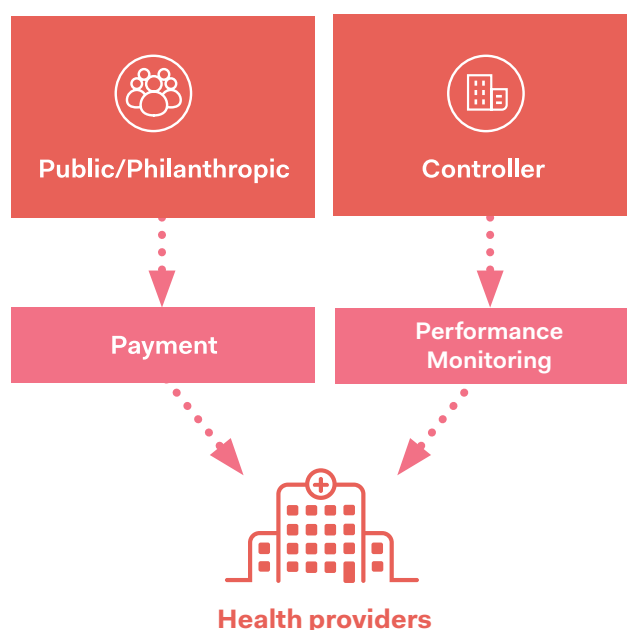
- **Financing tool(s):** Performance-based contract
- **Funding mobilised:** USD 8.9 million annually (as of 2007)⁵⁷
- **Source of financing:** Public and Philanthropic
- **Recipient of financing:** Public healthcare providers
- **Geographies:** Rwanda
- **Inception:** 2002

Overview of financing tool

Rwanda was one of the first countries to implement performance-based financing (PBF) on a national scale. They use PBF to finance part of the ongoing costs of district hospitals, health centres and community health workers. Under the terms of the agreed upon contracts, financial (and non-financial) incentives are linked with the quantity and quality of pre-agreed upon outputs. In this way, healthcare providers are incentivised to operate in a way that meets performance targets efficiently.

The Ministry of Health collaborated with Management Sciences for Health (funded by USAID/PEPFAR) to pilot and scale up the Rwanda PBF structure. Under that structure, healthcare providers record and submit data on performance. The Ministry of Health, its partners, steering committees, and district hospital supervisors validate the data and submit invoices. The Government of Rwanda and its development partners “purchase” the outcomes, releasing money based on contractual agreements with the healthcare providers.

Figure 8: Tiered pricing options for SalaUno services (2012 Performance-based contract structure)



Source of financing

The Government of Rwanda and partner donors provide the financing for part of the ongoing costs of operating district hospitals, health centres, and community health workers. Under this PBF model, otherwise known as a fee-for-service model, payments are based on the number of health services delivered multiplied by the fee set for those services, adjusted by a quality score based on a comprehensive checklist.

It is important to note that under this public-public contract, performance-based payments do not cover the one-off costs of building infrastructure, which is financed by other public and philanthropic investment, or the entire ongoing costs of providing healthcare, as recipient healthcare providers also receive financing from a national community-based insurance scheme.

55. USAID and Management Sciences for Health, A Vision For Health: Performance-Based Financing in Rwanda, 2009.

56. Rusa et al., Center for Global Development, Rwanda: Performance-Based Financing in the Public Sector, 2009.

57. Meessen et al. World Health Organization Bulletin, Performance-based financing: just a donor fad or a catalyst towards comprehensive health-care reform?, 2010.

Recipient of financing

The recipients of this performance-based financing model are public healthcare providers, including district hospitals, health centres, and community health workers. Under the contract, healthcare providers can expect payments in proportion to their activities, meaning that in most cases funding should match costs incurred. Healthcare providers that can deliver services for less than the price agreed to under the contracts can generate efficiencies in the healthcare system. The resulting “profit” can then be reinvested into public sector healthcare delivery.

Under PBF (and a range of other reforms), Rwanda experienced: (i) a reduction in childhood mortality from 152 per 1,000 live births in 2005 to 103 per 1,000 live births in 2007; (ii) almost 100 percent increase in the average number of women per health centre (re)vaccinated against tetanus; (iii) an increase in the contraceptive prevalence rate among married women from 10% in 2005 to 36% in 2007–08; and (iv) an increase in the percentage of births attended by skilled health personnel from 31% in 2005 to 52% in 2007⁵⁸. Given that PBF finances only part of the ongoing costs of recipient healthcare providers, it is difficult to attribute these impacts to PBF alone. However, a World Bank study found that overall clinical care improved significantly in districts where the PBF model had been introduced⁵⁹.

Process to launch⁶⁰

With support from USAID, Management Sciences for Health worked with the Rwandan Ministry of Health to drive health sector reform, part of which involved the development of a PBF model. The Ministry of Health started piloting PBF models in 2002 with regards to individual projects. The full range of stakeholders, including development partners and healthcare providers, collaborated on the terms of the contracts, defining key performance indicators and developing rigorous monitoring and evaluation tools. Management Sciences for Health supported the development of a health information system to ensure that performance data could be recorded and verified.

Following the success of the pilot, the Government of Rwanda and donors agreed to expand the programme in multiple phases. By 2008, all district hospitals and health centres in Rwanda were operating under PBF contracts.

Key considerations when selecting this model

- **Performance-based contracts have the potential to improve the efficiency of funding for ongoing treatment costs.** Contracts that link payment to the volume and quality of services provided transfer the risk of poor performance onto healthcare providers. This can help to maximise the efficiency of ongoing operations, as healthcare providers are often best placed to manage the costs of service delivery. However, there is a risk that outcome funders “over-pay” for outcomes or that they create moral hazard where healthcare providers may prioritise more “profitable” services (i.e., those where they can reduce costs the most). It is important that funders scrutinise the terms of the contract and the outcomes of ongoing evaluations to ensure that they are achieving their expected impact.
- **Performance-based contracts can partially or fully subsidise demand for private healthcare providers.** The Government of Rwanda chose to focus only on public healthcare providers in their PBF model. However, performance-based contracts can be used to purchase outcomes from private healthcare providers. Third-party payments for outcomes can de-risk infrastructure investments for private healthcare providers by increasing the demand for services from patients who otherwise might not be able to pay for their services. If the return from PBF is sufficient, then private healthcare providers may be incentivised to make one-off investments that increase capacity or improve efficiency/quality of services.
- **Performance-based contracts can mobilise additional philanthropic capital.** The clear link between payments and results provided by performance-based contracts may attract funders who are motivated by proven health returns.
- **Performance-based contracts may be more complex for cancer treatment services.** PBF must be built on clearly defined, measurable, and achievable goals. These goals must also be verified within a relatively short timeframe to ensure the timeliness of reimbursement to healthcare providers. This means performance would likely have to be linked to outcomes (e.g., number of patients treated). Given the serious nature of cancer treatment, great care would be needed to avoid moral hazard. Involvement of medical, technical, and financial experts at the contract development stage would be essential to ensure success.

58. Interim Demographic and Health Survey (2007–08) and other sources.

59. USAID and Management Sciences for Health, A Vision For Health: Performance-Based Financing in Rwanda, 2009.

60. USAID and Management Sciences for Health, A Vision For Health: Performance-Based Financing in Rwanda, 2009.

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