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Infected By The Hospital, Invisible In The Registry: Pediatric HIV And Unreported Cancer Deaths In Taunsa Sharif, Pakistan

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Abstract

Background. Taunsa Sharif, a neglected tehsil in southern Punjab, Pakistan, is simultaneously experiencing two interlinked public health crises. Between November 2024 and October 2025, 331 children aged six months to ten years tested HIV-positive following visits to the Tehsil Headquarters Hospital, attributed to reused injection equipment, mirroring the 2019 Larkana outbreak. Concurrently, a silent cancer epidemic persists across every union council of Taunsa.

Methods. A structured narrative review was conducted drawing on NACP surveillance data, outbreak field reports, BBC Eye investigative footage, Punjab Cancer Registry records, WHO-EMRO publications, and national grey literature. Sources were retrieved from PubMed/MEDLINE, Google Scholar, WHO IRIS, and government repositories covering 2000 to 2025. Thematic synthesis was applied across four domains: the HIV outbreak, cancer under-reporting, shared structural determinants, and policy failures.

Results. The outbreak followed an iatrogenic pattern identical to Larkana: common-source transmission at a single government hospital with no pediatric ART centre within the tehsil Taunsa. Cancer deaths in Taunsa are systematically misattributed as respiratory or age-related illness. Breast and cervical malignancies are diagnosed at Stage III–IV due to the complete absence of screening and female clinical staff. Both crises share the same structural roots: extreme poverty, female illiteracy, unenforceable infection control standards, and an under-equipped Lady Health Worker cadre.

Conclusion. Both crises are preventable and require an immediate, integrated response. Priorities include a forensic outbreak investigation, a tehsil-level pediatric ART centre, mandatory quarterly infection-control audits, and quarterly mobile cancer screening across all union councils. HPV vaccination should be introduced through the Expanded Programme on Immunization with Taunsa as a first-phase district. Lady Health Workers must be trained and equipped for HIV counselling and cancer warning-sign recognition. Without simultaneous action on both fronts, Taunsa will continue producing preventable deaths that are never counted.

Keywords: iatrogenic HIV; pediatric HIV outbreak; cancer under-reporting; southern Punjab; health equity

Introduction

In late 2024, a local physician in Taunsa began seeing HIV-positive children in numbers that made no sense without a common source. Not one or two, a stream. Most were under ten years old. Most had no family history of HIV. What they had in common was a hospital. By October 2025, data compiled from provincial screening, private clinic records, and BBC Eye's investigation confirmed 331 cases [1,2]. Footage filmed inside THQ Hospital over 32 hours showed staff drawing from multi-dose vials with the same syringe for multiple children in sequence. In that practice, one infected child becomes thirty. Thirty becomes three hundred.

Pakistan has been here before. In Larkana in 2019, a doctor infected more than a thousand children through the same mechanism, reused injection equipment, no sterilisation between patients, no one watching [3,12]. There were investigations. Commitments were made. Reports were written. And then Taunsa happened, in a different province, six years later, in a government hospital that had apparently never been audited against the standards those commitments promised. The Taunsa outbreak is not a freak occurrence. It is what happens when infection control reform stays in the language of policy and does not reach the hands of the staff who draw the syringes.

The second crisis in Taunsa makes no headlines and has no count attached to it. Cancer is present in every settlement across this tehsil. Community health workers and Lady Health Workers who move through these villages do not describe a place where cancer is rare, they describe a place where it is common, recognised at the household level, and never officially named. The man in Kot Mithan whose jaw problem has been worsening for fourteen months. The woman who found a lump and has told no one, who is somewhere in the months or years between discovery and the point where concealment becomes impossible. The widow whose post-menopausal bleeding her family

attributes to age and God's will. None of them are in the Punjab Cancer Registry. When they die, their causes are listed as something else. The cancer that killed them disappears into the record as weakness, chest trouble, an internal problem. Every village in Taunsa carries this burden. Not one village's worth of it has ever influenced a provincial health budget (4).

These two crises belong in the same paper because they belong to the same community and come from the same failures. A health system that cannot enforce aseptic technique at its own district hospital is also a health system that has never deployed a mobile cancer screening unit in the villages around it. The LHW who should now be conducting HIV case-finding after the outbreak is also the LHW who was never trained to recognise an oral lesion or refer a breast lump. The HIV-positive girls identified in the outbreak will carry elevated cervical cancer risk for the rest of their lives, in a community that offers neither HPV vaccination nor cervical screening (1,4,20). These connections are not rhetorical. They are operational, and they mean that the response to both crises must be designed together, not handed to separate programmes that will each miss the other half of what they should be doing.

2. Rationale

Pakistan's published health research follows its tertiary hospitals. HIV literature clusters around Lahore, Karachi, and Faisalabad. Cancer data reflect the experiences of patients who reached DHQ hospital D.G Khan or travelled to Multan, patients with money, mobility, and household permission to seek care. Communities like Taunsa, sixty kilometres from the nearest referral centre and largely absent from any systematic surveillance, are not so much under-represented in this literature as simply not there. The data gap is then read as a relative absence of burden, which justifies not investing in the data infrastructure that would

correct it. The cycle produces communities that are simultaneously the most burdened and the least resourced.

This analysis comes out of a parent study examining the HIV-cancer double burden across DG Khan division. Taunsa warrants its own paper for reasons that are specific rather than merely emphatic. The iatrogenic outbreak is a Taunsa-specific institutional failure requiring a Taunsa-specific institutional response. The cancer under-reporting in this tehsil is severe enough at the union council level, present in every settlement, counting nowhere, that division-level analysis obscures rather than illuminates it. And the intersection between the outbreak and the long-term cancer risk for HIV-positive children growing up in a community with no HPV vaccine and no cervical screening is a question that can only be asked at this level of specificity. Both crises get equal space here because the community carrying them deserves an analysis that sees both.

3. Methods

3.1 Design

Structured narrative review. The choice of method reflects the evidence base: this is a community that has been systematically under-studied, and the available sources, surveillance data, outbreak documentation, qualitative field intelligence, national programme reports, and published research on comparable situations, are too heterogeneous in type and quality for a formal systematic review to handle well. The task is synthesis and interpretation, not meta-analysis.

3.2 Sources

Published literature was searched across PubMed/MEDLINE, Google Scholar, WHO IRIS, and the EMRO Health Systems Observatory from January 2000 to April 2025. Grey literature came from the NACP Pakistan website, Punjab Health Department publications, UNICEF Pakistan, WHO Pakistan country documents, and UNAIDS country

updates. Outbreak-specific primary data were drawn from the author's earlier publication [1] and BBC Eye's documented investigation [2]. Search terms covered both disease domains, iatrogenic and pediatric HIV in Pakistan, unsafe injection and infection control failures, rural cancer burden and under-reporting, and oral cancer, breast and cervical cancer in southern Punjab, and the structural determinants shared between HIV and cancer in comparable low-resource settings.

3.3 Inclusion and Exclusion

Included: sources reporting data on iatrogenic HIV or pediatric outbreaks; infection control failures in Pakistani health facilities; cancer epidemiology or surveillance gaps in Pakistan, Punjab, or DG Khan; cancer under-reporting in low-resource settings; or shared structural determinants of HIV and cancer. Excluded: sources published before 2000, those focused exclusively on high-income contexts without transferable implications, and inaccessible abstracts only.

3.4 Analysis

Thematic synthesis across four domains, the HIV outbreak, cancer under-reporting, shared structural determinants, and policy failures with recommendations, with equivalent analytical attention maintained across the HIV and cancer domains throughout.

4. Results

Theme 1: 331 Children, One Hospital, the Same Mistake Again

What happened and how

Between November 2024 and October 2025, 331 children in Taunsa tested HIV-positive [1,2]. Ages ranged from six months to ten years. Of 97 mothers tested, four were HIV-positive, far too few to account for 331 vertically transmitted cases. The shared exposure was THQ Hospital. Hidden footage filmed there over 32 hours documented staff using the same syringe to draw from multi-

dose vials for multiple children. Four instances were captured on film in that period alone [2]. The epidemiological pattern and the visual evidence tell the same story: HIV entered these children through the healthcare system that was supposed to protect them.

This is not an unusual way for HIV to spread in Pakistan's rural health facilities. Research has consistently found that more than 70 percent of therapeutic injections in the country involve unsafe practices, reused equipment, inadequate sterilisation, informal providers with no aseptic training [5]. Iatrogenic transmission is a documented and growing contributor to new pediatric HIV infections nationally [6]. THQ Hospital Taunsa was not doing something exceptional. It was doing what a large proportion of the country's rural health facilities do, in a regulatory environment that has never enforced the standards written into national policy with sufficient consistency to change what actually happens at the point of care.

Larkana already showed us this

The 2019 Larkana outbreak infected more than a thousand children through a single practitioner reusing injection equipment [3,11]. It was investigated, prosecuted, and widely reported. National commitments to infection control reform followed. None of it reached Taunsa in any operationally meaningful way. Six years later, the same children are being infected through the same practice, and the medical superintendent suspended from THQ Hospital Taunsa in March 2025 had, according to BBC Eye, resumed clinical work at a rural health centre outside Taunsa by June, seeing patients, including children, within three months of suspension [2]. That is the institutional follow-through that 331 infected children received [1].

No treatment in reach

When the outbreak was confirmed, there was no pediatric ART centre in Taunsa. The nearest adult facility was sixty kilometres away in DG Khan city.

Pediatric antiretroviral therapy is not simply a lower dose of adult medication, the formulations, monitoring protocols, and clinical management differ substantially by age and weight. A referral to an adult centre sixty kilometres from a family that has lost income, is managing stigma, and cannot afford repeated travel is not a treatment plan. For a significant proportion of the 331 children, it amounted to no treatment plan at all [1].

Stigma made everything worse. Children were refused school entry. Families faced community ostracism severe enough that some concealed the diagnosis rather than seek care, because disclosure meant consequences the household could not manage. This pattern is well-documented in comparable outbreak settings [7]. In Taunsa it was not a secondary social problem. It was a barrier to treatment that intersected directly with the absence of local ART capacity to ensure that many of the most vulnerable children went untreated for months after diagnosis [22].

Theme 2: Cancer in Every Village - Every Year - Counted Nowhere

The data that does not exist

There is no cancer registry for Taunsa. There is none for DG Khan district. The Punjab Cancer Registry records cases that reach DHQ Hospital in DG Khan city or the tertiary centres in Multan. Getting there requires money for transport, male household permission for women to travel, awareness that symptoms are worth investigating, survival long enough to make the journey, and the financial capacity to sustain investigation once arrived. In Taunsa, where poverty is severe and sixty kilometres of road separates the tehsil from DG Khan city, most people with cancer do not make it into the registry. The cases recorded are the cases that broke through. The others, the majority, simply are not there [19].

Community health workers who spend years in Taunsa's villages do not experience it as a place where cancer is rare. They experience it as a place where cancer is present in every settlement, talked

about within households in the language of fate and God's will, and completely absent from any official count. Ask a Lady Health Worker who has done home visits in Taunsa's rural areas long enough. She will name someone. She always can.

Oral cancer

Naswar, powdered tobacco mixed with lime and ash, worn under the lip or packed into the cheek, is part of the daily social fabric of Taunsa and southern Punjab in a way that has no equivalent among the carcinogens most communities are exposed to. Use begins in adolescence, continues through a man's entire adult life, and carries no cultural stigma. The carcinogenicity is documented and mechanistically understood: nitrosamine-mediated squamous cell carcinoma of the oral cavity, buccal mucosa, and floor of the mouth [9]. What is not documented, in Taunsa, is the awareness campaign that would have told the men using it. There has not been one.

Men in Taunsa who develop early oral cancer, the white patch that does not heal, the ulcer that has been present for three months, the jaw stiffness that comes and goes, attribute it to a tooth. They wait. By the time the lesion is large enough that the family insists on a clinic visit, the disease has often crossed the line between resectable and inoperable. They arrive at DHQ Dera Ghazi Khan or travel to Multan and are counted, at that point, in whatever facility record exists. The years of progression before that, the Stage I disease that a competent LHW with training and a light could have spotted and referred, produced no entry in any data system. It was there, in Taunsa's villages, doing its work, invisible [15].

Breast cancer: no one to examine, no one to tell

Breast cancer accounts for roughly 23 percent of female malignancies in DG Khan. In Taunsa, essentially no woman has been screened. There are no female doctors at rural health facilities. Male clinical examination is not acceptable in most households. Lady Health Workers, who do have

household access and gender acceptability, have not been trained in breast examination and do not carry the equipment. The result is that a woman in Taunsa who develops breast cancer has no realistic pathway to early detection. She notices it herself, eventually. She carries it for months or years before disclosing it, navigating a sequence of questions, whether to tell her husband, whether he will allow her to seek care, how to pay for it, at any point of which the process can stop [1].

When these women do finally reach a clinician, they arrive at Stage III or IV. Five-year survival rates below 30 percent at that stage are not statistics in Taunsa. They describe an outcome that is, under current conditions, essentially universal for every woman who receives a breast cancer diagnosis here. Not because breast cancer is incurable, but because the infrastructure for finding it early does not exist in this community, and has never been funded to exist here.

Cervical cancer:

Cervical cancer in Taunsa was already a crisis before the HIV outbreak, no HPV vaccination, no VIA or Pap screening, no female providers for intimate examination, restricted mobility for women who might otherwise seek care. The outbreak added a specific, quantifiable, and long-term dimension. In HIV-positive women, immune clearance of high-risk HPV infection is impaired; persistent infection is more common; progression from intraepithelial neoplasia to invasive carcinoma is faster and occurs at younger ages [9]. The 331 children confirmed HIV-positive in Taunsa include girls who will carry this elevated risk throughout their adult lives [1]. They will carry it into a community that today offers neither HPV vaccination nor cervical screening. The outbreak created a cohort. The health system has made no provision for what happens to that cohort twenty years from now [20].

For women not in the outbreak cohort, cervical cancer advances year after year without any mechanism for detection. Abnormal bleeding is a private matter, attributed to age or physical

exertion. Persistent discharge is managed at home with whatever is available. The pathway from symptom to diagnosis does not exist here at any stage. Cases arrive at facilities, if they arrive at all, when the disease is beyond treatment. They are counted then. Everything before that presentation, which is everything that mattered clinically, was happening in Taunsa's villages, uncounted and unresponded to.

Every village, every year

Across Taunsa's union councils, Taunsa city, Kot Mithan, Choti Zareen, Pai, Dajal, and the settlements scattered toward the Sulaiman Range, the pattern that community health workers describe does not vary by location. In every settlement, there are people with cancer. There are people who died of cancer last year. There are people who will die of cancer next year. A man in Kot Mithan died last winter recorded as a respiratory death; his community health worker describes an oral cavity lesion that had been destroying the floor of his mouth for over a year. A woman buried in a remote village two seasons ago left behind a three-year-old breast mass her family had known about and discussed among themselves in terms of God's will. These are representative cases, not exceptional ones. The community health workers who describe them are not surprised by them. This is the texture of illness in these places.

And cancer deaths in Taunsa are not just uncounted, they are misattributed in ways that prevent future prevention. The family that buries a man of oral cancer without knowing the cause does not know to worry about the other naswar users in the household. The children of a woman who died of cervical cancer attributed to internal weakness do not know that their mother's disease has any relevance to their own health. The signal that a correct cancer attribution generates, the prompt to screen, to reduce exposure, to seek assessment, is erased at the moment of misattribution. Taunsa's cancer burden does not only fail to be counted. It fails to teach the community anything about itself.

Morbidity sits behind every mortality figure. For

each person dying of undiagnosed cancer in a given year, several more are living with active malignancy at various stages between early detectable disease and terminal illness. The man with a Stage I oral lesion who does not know its name. The woman somewhere in the gap between finding a lump and the moment concealment is no longer possible. These people are not in any database. They are in Taunsa's villages, now, with no system reaching them.

Theme 3: The Same Fuel for Both Fires

The HIV outbreak and the cancer crisis are not separate problems that happen to share a postcode. They are produced by the same conditions, running through the same households.

The immediate common thread is the collapse of health quality governance. The infection control failures that allowed THQ Hospital to infect 331 children and the complete absence of community cancer screening in Taunsa's villages both reflect a health system that has not invested in the enforcement, outreach capacity, or accountability infrastructure needed to deliver safe and preventive care here [21]. You cannot have functioning disease prevention in a district where the public hospital has never been audited for sterilisation compliance. Both failures come from the same institutional logic, not the same event, but the same pattern of institutional neglect.

Poverty shapes both burdens in ways that go beyond resource constraints. Families of HIV-positive children cannot absorb repeated travel to an ART centre sixty kilometres away. Women with undetected breast or cervical cancer cannot sustain the referral process to Multan. But poverty also determines what happens when these families do seek care and are turned away by cost, distance, or the bureaucratic demands of a system designed for people with more flexibility than they have [16, 21]. It is not just that the poorest families in Taunsa are most exposed to unsafe injection and most likely to have undetected cancer. It is that when either of those things happens, the system's response is designed for someone else.

Female illiteracy below 25 percent in Taunsa means that written health information reaches very few women through any channel other than direct conversation with a Lady Health Worker [4,16]. The woman who does not know that her husband's HIV infection puts her at risk is the same woman who does not know that a persistent breast lump warrants investigation. The social norms that prevent her from seeking one test prevent her from seeking the other. The information exclusion operates across both disease burdens at once.

The LHW cadre is the only thread that connects either response to the households that need it. LHWs are present in Taunsa, speak Saraiki, and have the household access that no facility-based provider can replicate. They have been given no HIV counselling training, no rapid test kits, no cancer warning-sign protocol, and no referral pathway that functions within the tehsil [16]. The gap between what they could do and what they are equipped to do is the most readily closed structural gap in Taunsa's health system.

Table 1. Burden Indicators: Iatrogenic HIV and Cancer Under-Reporting - Taunsa Sharif

Indicator	HIV - Taunsa Sharif	Cancer - Taunsa Sharif	National / Comparator
Confirmed burden	331 children aged 6 months–10 years; iatrogenic outbreak Nov 2024–Oct 2025	Unknown; no registry; village-level cases never counted	Larkana 2019: >1,000 children (iatrogenic HIV)
Primary mechanism	Unsafe injections / reused equipment at THQ Hospital	Naswar oral cancer; unscreened breast/cervical disease; HPV-HIV co-pathology	Unsafe injection: >70% of therapeutic injections in Pakistan
Diagnostic infrastructure	No pediatric ART centre in Taunsa at outbreak detection	No cancer screening; no mobile units; no registry	Absent in most rural districts nationally
Stage at detection	Children infected before any test offered	Predominantly Stage III–IV; curative window closed	60–70% late-stage cancer nationally
Prevention coverage	No pediatric HIV testing; no PMTCT at primary care	No VIA; no CBE; no HPV vaccination; no oral screening	<5% eligible women screened cervically nationally
Treatment access	None within tehsil; nearest ART 60 km away	No chemotherapy or radiotherapy in district; Multan referral unaffordable	Absent in most rural districts
Shared determinants	Extreme poverty; female literacy <25%; no enforcement; no community programme — barriers common to both burdens	Extreme poverty; female literacy <25%; no enforcement; no community programme — barriers common to both burdens	Poverty ~38%; literacy ~48% nationally

5. What Failed

Both crises were preventable. What produced them was not bad luck or a sudden collapse, it was the accumulated result of specific, traceable decisions about enforcement, investment, and where the health system's attention should go.

5.1 Infection control that exists on paper only

Pakistan's national policy requires single-use syringes, sterilisation between patients, and oversight of injection-administering providers. Research spanning more than two decades has found these requirements consistently unmet: over 70 percent of therapeutic injections involve unsafe practices, iatrogenic transmission accounts for a growing fraction of new pediatric HIV infections, and the regulatory machinery that would enforce compliance, unannounced facility audits, meaningful licensing consequences, coverage of informal practitioners, has not been built [10, 13, 14]. THQ Hospital Taunsa was the product of that environment, not an outlier within it.

5.2 Pediatric ART that requires a sixty-kilometre journey

There is still no pediatric ART centre in Taunsa. The 331 HIV-positive children require lifelong antiretroviral therapy, virological monitoring, nutritional support, and psychosocial care [1]. None of this is available within the tehsil. Pediatric ART is not simply adult ART in a smaller dose - formulations, regimens, and monitoring requirements differ substantially by age. The nearest adult centre is sixty kilometres away. For families managing stigma, financial stress, and the practical demands of bringing a small child to repeated appointments in a city they cannot easily reach, that distance is not inconvenient. For many, it is the reason their child is not receiving treatment.

5.3 Accountability that vanished within three months

An outbreak of this scale requires investigation that confirms the mechanism, establishes the exposure window, identifies the full scope of affected children, and supports accountability proceedings. The medical superintendent of THQ Hospital was suspended in March 2025. According to BBC Eye, he was back at work as a senior medical officer at a rural health centre on the outskirts of Taunsa by June, seeing patients, including children, within three months of suspension [2]. The Larkana investigation showed that forensic accountability for iatrogenic HIV transmission is achievable in Pakistan [11,12]. What happened in Taunsa was something else.

5.4 Cancer surveillance that stops at the hospital gate

The Punjab Cancer Registry records cases that reach facilities. In Taunsa, most cancer cases never do. The surveillance architecture captures what is visible to the facility system and allocates resources accordingly, which means it chronically under-resources the communities whose cancer burden is least visible because they are least able to travel. Breast cancer in women who never made it to Sheikh Zayed. Cervical cancer in women whose abnormal symptoms were private matters. None of this is in the registry, and therefore none of it shapes provincial cancer policy. The under-representation of Taunsa in the data is not a measurement error. It is a design outcome [24].

5.5 Screening that was never deployed here

No mobile cancer screening unit has ever operated in Taunsa. No VIA programme, no organised breast examination, no oral cancer early detection initiative, no HPV vaccination. Each of these is absent not because the technology or methodology is unavailable, Pakistan uses mobile health delivery for immunisation, polio, and maternal outreach, but because the decision to extend it to cancer

screening in rural southern Punjab has not been made. Every year it is not made, the cancer accumulating in Taunsa's villages remains both invisible and growing.

5.6 Intimate examination with no female provider

Cervical screening and clinical breast examination require a female provider in Taunsa's conservative rural households. There are no female doctors at rural health facilities in the tehsil. Lady Health Workers have the gender access and household relationships that could make community-level examination feasible, and they have not been trained in breast examination or VIA. The two most common female cancers here are structurally undetectable under current conditions, not because

the tests are expensive, but because the trained female hands to perform them have not been positioned where women live.

5.7 LHW potential left unused

Lady Health Workers in Taunsa have what no facility-based programme can buy: community presence, linguistic access in Saraiki, and household relationships built over years of visits. They have no HIV counselling training, no rapid test kits, no cancer warning-sign protocol, and no referral pathway within the tehsil for either condition [4]. The failure is not in the workers. It is in the sustained institutional decision not to equip them for the two conditions that most urgently require community-level reach in this district.

Table 2. Policy Failures and Recommendations; HIV and Cancer in Taunsa Sharif

Domain	Crisis	What Failed	What Must Happen
Outbreak investigation	HIV	No independent forensic audit; source unconfirmed; suspended official back at work within months	Independent commission; phylogenetic analysis; public findings in 60 days; real accountability
Pediatric ART	HIV	No centre in Taunsa; children referred to adult facility 60 km away	Dedicated pediatric ART in Taunsa within 30 days; all 331 enrolled within 60 days
Community HIV screening	HIV	No door-to-door or systematic testing programme	Door-to-door voluntary testing across all union councils; public case reporting
Infection control	HIV	No sterilisation audits; unsafe injection endemic; THQ unregulated	Quarterly unannounced audits; auto-disable syringes mandatory; licensing enforcement
Health worker accountability	HIV	No mandatory certification; informal providers operate freely	Mandatory retraining and certification; non-compliant facilities closed
Stigma — HIV children	HIV	Children excluded from schools; families ostracised; diagnosis concealed	Community campaign with faith leaders; enforced school re-admission; family support
Cancer surveillance	Cancer	No registry; village deaths never recorded	DG Khan cancer registry; Taunsa sub-district disaggregation; LHW case notification
Mobile cancer screening	Cancer	No programme ever deployed in Taunsa	Quarterly mobile units to all union councils: VIA, CBE, oral inspection, HIV testing
Cervical cancer	Cancer	HPV vaccine absent; HIV co-	HPV vaccine in EPI; DG Khan and

		infection elevates risk; no VIA	Taunsa first-phase districts; mobile VIA
Oral cancer	Cancer	Naswar endemic; no awareness; no early detection	Naswar cessation IEC in Saraiki; LHW oral inspection training; referral pathway
Breast cancer	Cancer	No CBE; no female providers; Stage IV presentation universal	Female LHW CBE training; mobile examination units; referral to Sheikh Zayed
LHW capacity	Both	No HIV training; no cancer protocol; no rapid test kits	Integrated in-service training; rapid test kits as standard LHW equipment
Social protection	Both	Sehat Sahulat excludes HIV treatment and most cancer care	Expand benefit package to cover HIV and oncology comprehensively

ART = Antiretroviral Therapy; CBE = Clinical Breast Examination; EPI = Expanded Programme on Immunisation; LHW = Lady Health Worker; THQ = Tehsil Headquarters; VIA = Visual Inspection with Acetic Acid.

6. What Needs to Happen

HIV; Now

6.1 A real forensic investigation

An independent commission, epidemiologists, infection control specialists, civil society, must convene immediately, confirm the transmission mechanism, establish the full exposure window, identify every child affected, and publish findings within sixty days. Phylogenetic analysis of strains from affected children should confirm common-source transmission. The commission must have the authority to make recommendations that carry legal weight. A suspension followed by reassignment to patient-facing work three months later is what Taunsa received after March 2025. It is not what 331 infected children are owed [1].

6.2 Pediatric ART in Taunsa; thirty days

A dedicated pediatric ART centre within Taunsa tehsil within thirty days. Age-appropriate formulations from infancy through pre-adolescence. Virological monitoring, nutritional assessment, and counselling. All 331 confirmed cases enrolled within sixty days of opening. Children who share the common exposure but have not yet been tested must be actively traced and offered testing. This is not a complex intervention. It is a tent with a trained clinician, a counsellor, and

a cold chain for medications, positioned here, not sixty kilometres away.

6.3 Door-to-door HIV screening

A systematic door-to-door voluntary testing programme must reach every union council, every child with a documented THQ Hospital treatment history during the relevant period, every household contact of a confirmed case, and any community member who asks to be tested. Results feed directly into the ART centre through a structured follow-up protocol. Case numbers should be published on a regular public schedule. Not to satisfy a reporting requirement, to ensure the outbreak's true scope gets documented rather than quietly contained.

6.4 Infection control - enforced, not declared

Auto-disable syringes mandatory at every public and private facility in Taunsa and DG Khan. Unannounced quarterly sterilisation audits at all facilities, with results publicly reported to the DHA. All injection-administering staff must hold current certification. Informal providers without licensing face operational consequences, not warnings. This is not a new standard. It is an existing standard that has never been enforced here.

6.5 Children's right to go back to school

A community campaign, co-designed with affected families, religious scholars, and school administrators, to restore the rights of HIV-positive

children to school attendance and social participation. The campaign must communicate clearly, in language the community understands and trusts, that these children were infected by a healthcare system failure. Faith leaders who will speak to this publicly have reach no government communication can match. Schools that have excluded affected children must be required to re-admit them under provincial legal authority.

Cancer; Now and Sustained

6.6 Mobile screening to every union council, every quarter

Mobile cancer screening units need to reach every union council in Taunsa on a quarterly rotation, VIA for cervical cancer, clinical breast examination, oral cavity inspection with naswar cessation counselling, and opportunistic HIV rapid testing in the same visit. All intimate examinations by female health workers; scheduling built around when and where women are actually accessible, coordinated with LHW supervisors who know the community. A three-year target of screening 60 percent of eligible women aged thirty to sixty, reported publicly every quarter. This is not a pilot programme to be evaluated after two years. It is the floor-level response to a burden that has been accumulating without detection for decades.

6.7 A cancer register - even an imperfect one

A Taunsa sub-district cancer register should be started now, drawing on three data streams: LHW-reported suspected cases from home visits, confirmed diagnoses at any facility, and cases presenting at DHQ Hospital from Taunsa addresses. It needs to capture cancer type, stage at first clinical contact, treatment status, and outcome, including death. Annual publication of even incomplete figures creates the accountability infrastructure that currently does not exist anywhere in this district. A register that starts imperfect and builds is not a compromise. Under current conditions, it is the only honest starting point.

6.8 Tell men what naswar is doing to them

An oral cancer awareness programme in Saraiki, delivered through LHWs and mosque networks, needs to communicate the specific carcinogenic risk of naswar plainly, not in clinical language, but in terms that connect to daily life in these communities, and describe the early warning signs a man should bring to a health worker rather than attribute to a tooth. A referral pathway from LHW identification of a suspicious oral lesion to clinical review at a district facility must be in place before the programme launches. The men most burdened by oral cancer in Taunsa are reached through mosque committees and male social networks, not through posters at a health centre they do not visit.

6.9 HPV vaccination - Taunsa first

HPV vaccination needs to enter Pakistan's national EPI schedule, with DG Khan and Taunsa designated as first-phase districts. The reason is specific: the girls identified as HIV-positive through the outbreak will carry elevated cervical cancer risk throughout their adult lives, in a community that currently offers them neither vaccination nor screening. School-based delivery for girls aged nine to fourteen is the most effective platform. Community engagement, through female teachers, LHWs, and mosque committees, must be built into the rollout design before the vaccine arrives, not added afterwards when resistance has already formed. Health system trust in Taunsa has been seriously damaged by the outbreak. A vaccination programme that arrives without community preparation will face that damage directly [17].

Large-Scale Research; Funded and Sustained

6.10 Population-based cancer prevalence survey

A comprehensive population-based cancer prevalence survey should cover all union councils in Taunsa, with Lady Health Workers as primary data collectors conducting structured household interviews across all adult members, covering

symptom history, family cancer history, tobacco and naswar exposure, and reproductive health. Suspected cases would receive confirmatory clinical assessment through a mobile diagnostic unit operating concurrently. The survey needs to be powered to produce union council-level prevalence estimates, not district aggregates that flatten the variation that actually matters for resource allocation. Funding should be sought jointly from PMRC, HEC, WHO Pakistan, and IARC. It would be the first genuine population-based cancer burden study for any rural district in southern Punjab, and a methodological template for comparable work across the region.

6.11 Verbal autopsy: counting the deaths already lost

A community-based cancer mortality study using verbal autopsy, structured interviews with the families of people who died in the preceding three to five years, should be conducted across Taunsa's union councils to reconstruct the cancer-attributable fraction of mortality that hospital records have never captured. The method is well-established in comparable South Asian settings and is feasible with LHW-level interviewers using standardized instruments. It would produce the first defensible estimate of how many people die of cancer in Taunsa each year without a diagnosis, the number this paper argues is present in every village and currently counted nowhere [23].

6.12 A permanent DG Khan cancer registry

A cancer registry establishment grant should create a permanent, prospective, population-based DG Khan district registry with mandatory Taunsa sub-district disaggregation, hosted by Ghazi University, with community notification arms reaching LHWs and private practitioners. The appropriate funding mechanisms are the International Cancer Research Partnership, WHO-IARC registry development support, and Global Fund health systems strengthening grants. Three years to full operation is a reasonable and achievable target.

6.13 Oral cancer case-control study

A case-control study of oral cavity cancer and naswar use in Taunsa and DG Khan, conducted through Ghazi University with PMRC funding, would establish the local dose-response relationship and characterise the socioeconomic and behavioural profile of affected men, the groundwork for a cessation and early detection programme that is designed for this population rather than adapted from somewhere else. Publication in indexed journals would introduce Taunsa data into the international smokeless tobacco carcinogenicity literature, where it is currently entirely absent.

6.14 Why women present at Stage IV

A mixed-methods study of the barriers to cancer diagnosis and treatment-seeking in Taunsa, measuring delays quantitatively and exploring the social, financial, and gender dynamics producing them through qualitative methods, would provide the implementation evidence needed to design interventions that work here. Why does a woman in Taunsa carry a breast lump for two years before disclosing it? Which specific combination of factors, her husband's likely response, the distance to care, the cost, the social cost of a diagnosis, the absence of a female provider, determines whether she eventually seeks help or does not? Without answers to those questions, a screening programme adds infrastructure to a system whose human reality it has not understood.

These research priorities need funding at scale. A dedicated competitive research fund for DG Khan and Taunsa, administered through Ghazi University funded by PMRC, HEC, and international partners, ring-fenced for community-based epidemiology and implementation science, would produce returns in policy-relevant evidence that far exceed what the same resources yield distributed across the standard urban academic research portfolio. Taunsa does not need better data for its own sake. It needs better data because without it, the health system will continue allocating resources as if the cancer burden in these villages does not exist, which, in every official

record, it currently does not.

6.15 Train and supply the LHWs for both

Every LHW in Taunsa needs integrated in-service training that covers HIV counselling and rapid test administration alongside cancer warning-sign recognition, oral, breast, and cervical, with clear referral criteria for each. Anti-stigma communication in Saraiki for both conditions. Navigation of referral pathways to the pediatric ART centre and the mobile cancer screening units. Rapid HIV test kits should be standard LHW equipment, the same as the blood pressure cuffs and growth charts they already carry. And performance reviews need to start measuring HIV testing facilitation and cancer warning-sign referrals, not only the maternal and child health indicators that currently define what a Lady Health Worker is accountable for.

6.16 Social protection that covers what is killing people

The Sehat Sahulat Programme must cover HIV treatment costs, ART, viral load monitoring, clinical management, and the full range of cancer care including chemotherapy and radiotherapy for patients referred to Multan. A family in Taunsa managing a child's HIV alongside a mother's Stage III breast cancer cannot defer either expense. The scheme that is supposed to protect the poorest families consistently excludes the conditions most affecting them. That is a correctable design choice, not a fixed feature.

7. What This Means

7.1 For practice

In Taunsa, where the Lady Health Worker is the primary, often the only, connection between the health system and the households it is supposed to serve, that integration is not a design preference. It is the only way either response actually reaches the people who need it.

7.2 For policy

The Taunsa outbreak is evidence that infection control reform after Larkana was not implemented with the depth, reach, or accountability mechanisms needed to prevent repetition. The specific evidence is the suspended medical superintendent back at work with children within three months. That outcome is not a failure of an individual, it is a failure of the system of consequences that was supposed to ensure accountability was real. Without funded, unannounced, routine facility audits as a standing district health authority function, not a post-outbreak response, but a permanent expectation, unsafe injection practice will continue in rural facilities where no one is watching [12, 25].

International health financing concentrated in urban Pakistani implementation sites is not addressing the HIV epidemic or the cancer burden equitably. Funding that improves infection control in Lahore's teaching hospitals does not change what happens at THQ Taunsa. Pakistani government counterparts in negotiations with the Global Fund, Gavi, and bilateral partners should insist that geographic equity criteria direct a defined proportion of implementation resources to high-burden rural districts. The principle of equity is written into every funding framework. The operational reality, in Taunsa, has been its opposite [25].

7.3 For research

On HIV: phylogenetic analysis of strains from the 331 children is the immediate forensic priority. Complete case ascertainment, systematically identifying every child exposed at THQ Hospital during the relevant period, not just those who presented voluntarily, is needed to establish the true outbreak scope. Long-term cohort follow-up of infected children will document ART outcomes and developmental trajectories in a setting that has never managed pediatric HIV at scale.

On cancer: the five priorities in the

recommendations, prevalence survey, verbal autopsy mortality study, permanent registry, oral cancer case-control study, and care-seeking barriers analysis, constitute a research agenda that could transform Taunsa from one of the least-documented rural cancer burdens in Pakistan to one of the most thoroughly characterised, within five years. The data gap is not natural. It is the consequence of research funding that has followed institutions rather than burden. Redirecting competitive grant funding toward DG Khan and Taunsa through Ghazi University is the mechanism for closing it.

7.4 For accountability

Three hundred and thirty-one children were infected at a hospital by staff reusing syringes, in a regulatory environment that made that practice normal rather than exceptional. Each of the decisions that created that environment, about audit frequency, certification requirements, enforcement consequences, was made by someone with authority over it. The cancer deaths in every village in Taunsa, the man filed as a respiratory death, the woman filed as internal weakness, are the outcome of a health system that decided, year after year, that mobile screening in rural southern Punjab was not a budget priority. Those decisions also have authors. Making them visible is not just an analytical exercise. It is the beginning of changing them [18].

8. Limitations

The outbreak count of 331 reflects data available at time of writing. Active community testing means the true figure may be higher. The transmission mechanism, while strongly supported by epidemiological pattern and filmed evidence, awaits confirmation through a completed independent forensic investigation, itself one of the recommendations of this paper. The medical superintendent's return to clinical work is

documented by BBC Eye [2]; the formal investigation status at the time of submission should be verified by the author before publication. Cancer burden data for Taunsa derive from provincial aggregates, field testimony, and structural inference. The argument that every village in Taunsa carries undetected cancer morbidity and mortality rests on consistent qualitative evidence and epidemiological reasoning, not a survey, because no survey exists. That absence is the surveillance failure this paper identifies. The narrative synthesis method introduces publication bias risks and cannot fully account for evidence from unpublished local health authority sources. The search was completed in April 2025.

These limitations are real. They do not alter the central findings: that 331 children were infected by an institution that should have protected them, that cancer is present and uncoded in every settlement in Taunsa, and that both crises require an immediate and integrated response [1].

9. Conclusion

Three hundred and thirty-one children went to THQ Hospital Taunsa for a vaccination or a routine treatment and came home with HIV. In every village across this tehsil, people are dying of cancer that was never diagnosed, oral cancers from thirty years of naswar, breast masses that went undisclosed for two years, cervical disease advancing in women who had no path to screening. Both of these things are happening, in the same community, right now. Both have been happening long enough that they should have been addressed before now.

The HIV outbreak has a number and has produced a BBC investigation and a provincial suspension. Whether that translates into real accountability, a completed forensic investigation, a pediatric ART centre that functions within the tehsil, infection control enforcement that outlasts the news cycle, is still being determined. The cancer burden has no number and has produced no investigation, no

suspension, and no response of any kind at community level. It has been accumulating silently, in every village, counted nowhere, shaping no budget, generating no policy change.

What this paper asks for is not complicated. Investigate the outbreak and publish the findings. Open a pediatric ART centre in Taunsa within thirty days. Deploy mobile cancer screening to every union council. Start a cancer register. Introduce HPV vaccination with Taunsa first. Train and supply the LHWs to handle both conditions. Fund the research programme that would, for the first time, produce population-level evidence of a cancer burden that every community health worker

in the district already knows is there. And enforce, actually enforce, the infection control standards that exist on paper everywhere in Pakistan and in practice nowhere in Taunsa.

The children who were infected at THQ Hospital had no choice about which facility their families took them to. The people dying of cancer in Taunsa's villages have had no choice about whether a screening programme reaches them. The obligation to change both of those facts belongs entirely to the people with the authority to do so. This paper is the evidence base for that change. The rest is political will.

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