



## **Case Study: The Economic & Clinical Outcomes of NHS Fife Child & Adolescent Mental Health Service, Intensive Therapy Service.**

### **Service Summary:**

The Intensive Therapy Service (ITS) is part of NHS Fife Child & Adolescent Mental Health Service (CAMHS). The team was established in September 2002 and provides high levels of support and therapeutic interventions to young people aged 8-18 years who are experiencing severe and complex mental health problems, and their family/carers. The ITS is provided within community settings and is tailored with regards to intensity, frequency and therapeutic approach to meet the needs and clinical presentation of each individual young person.

The ITS is a multi-disciplinary service, led by a Nurse Consultant and including Senior Nurse Therapists, a Senior Occupational Therapist, a Clinical Psychologist and an Assistant Psychologist. The team receives consultation and intervention from 4 Consultant Psychiatrists and sessional input from a Family Therapist. The Team works extremely closely with the other service providers within Fife CAMHS to ensure a responsive and holistic care provision is achieved. This Fife-wide service offers core provision Monday to Friday, 8.30am-4.30pm and places an emphasis upon the collaborative working with primary care providers and the young person's support systems to ensure that the young person's ongoing needs are met. Interventions out- with core service times can be provided and are determined by service capacity, clinical need and individual client circumstances.

### **Context and Change Drivers:**

The closure of NHS Fife CAMHS Inpatient Unit in 2002 instigated the need for a re-provision of care for children and young people within Fife who experienced severe and complex mental health problems previously treated in an inpatient setting. On a national level the closure of the Fife Inpatient Unit emphasised the shortage and further reduced the number of inpatient beds available for this client group across Scotland<sup>1</sup>.

The establishment of the NHS Fife CAMHS ITS offered an innovative solution to the therapeutic management of young people who suffered from severe mental health problems by introducing a model that is strengths focussed, individually responsive and offers an alternative to inpatient care.

Within this context key drivers have been identified and implemented nationally to ensure children and young people are treated in inpatient settings that are age appropriate<sup>2</sup> and for no longer than is necessary<sup>4</sup>, access services in a timescale that reflects their needs<sup>3</sup> and have access to services that have the least impact on their developmental process and social engagement<sup>4</sup>. The 2005 CAMHS framework for Promotion, Prevention and Care recommended that children and young people with severe mental health difficulties should be "managed in the community wherever possible".

In 2007/08, detailed work was undertaken by SEAT which concluded that additional inpatient beds were not required in the NHS Lothian CAMHS Inpatient Unit (IPU), if there was sufficient investment in intensive outreach services across the region. A proposal was submitted to and supported by the Scottish Government, who allocated recurrent funding of £459,000 in June 2009, to be match funded by Boards, to develop a model of care for tier 4 specialist CAMHS based on the development of intensive community treatment services across the region.

In July 2010, the SEAT Children and Young People's Health Service Planning Group agreed a three-year work programme for the Regional Tier 4 CAMHS Project. A regional CAMHS Consortium was established to drive and support the delivery of consistent, equitable, high quality Tier 4 CAMHS in Borders, Fife and Lothian. The Consortium is made up of CAMHS clinicians and managers from the 3 NHS Boards and meets every 2 months.

## **NHS Fife CAMHS Intensive Therapy Service:**

### **Inputs:**

#### **Set up Costs:**

There were no initial set up costs for the ITS as these were met through the closure of the original inpatient unit and the transfer of assets.

#### **Operational Costs:**

Total Operational Costs 2011/2012: **£542,321**

### **Operational Costs Breakdown:**

#### **Staff Costs:**

Nurse Consultant (8A):	1.00 WTE	£51,700
Clinical Psychologist (8A):	0.50 WTE	£25,850
Nurse Therapist (6):	3.60 WTE	£128,160
Occupational Therapist (6):	0.80 WTE	£28,480
Therapy Support Worker (3):	0.60 WTE	£12,300
Family Therapist (8A):	0.20 WTE	£10,340

Costs for 4 x 0.25 WTE Consultant Psychiatrists equate to £92,000. These costs would be incurred irrespective of ITS existence therefore are considered cost neutral to the ITS operational totals and are included in wider NHS Fife CAMHS budget.

**Total Staff costs 2011/12:** **£256,830**

#### **Travel Expenditure:**

Petrol costs, enhancements and general travel expenditure are calculated for each team member on a 3 year average.

**Total Travel costs 2011/2012:** **£32,300**

#### **Facilities:**

Office space and equipment are provided by NHS Fife CAMHS. No additional costs are incurred through the functioning of the ITS.

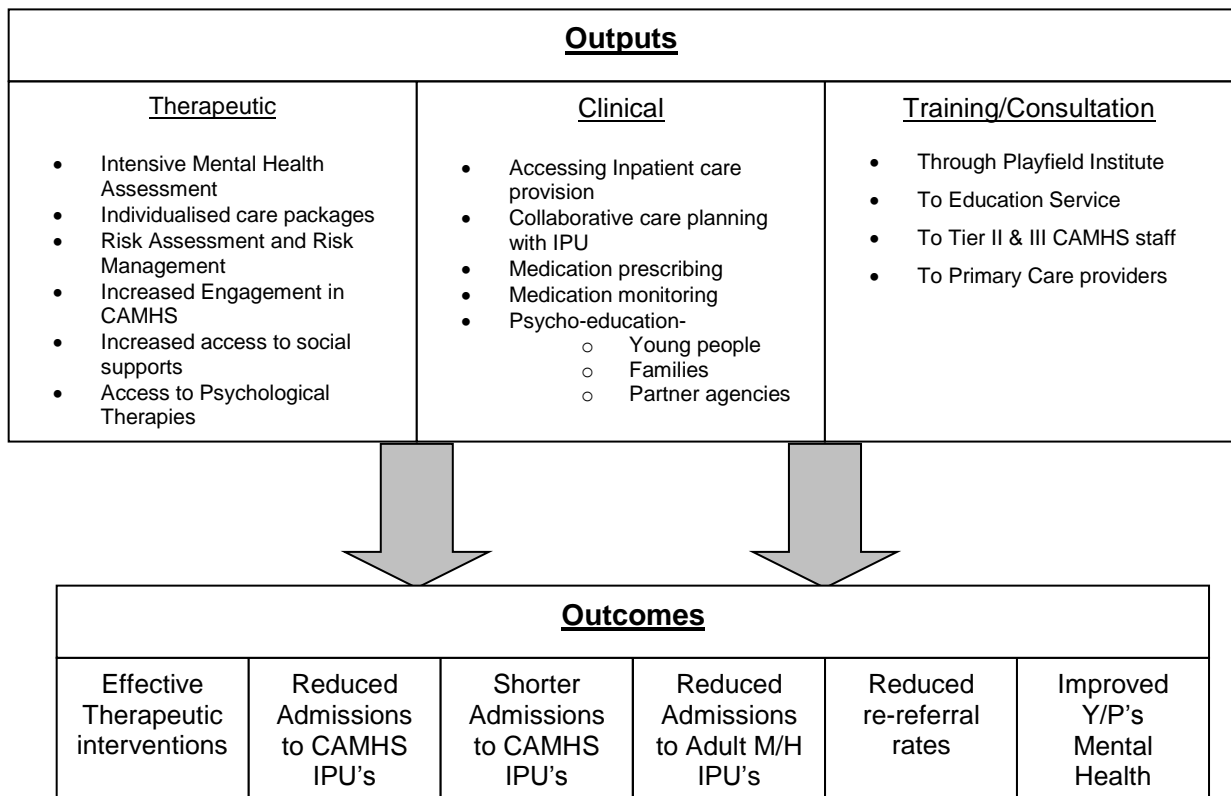
#### **External Resources:**

Regional Inpatient Unit (NHS Lothian) provides inpatient care charged on an as required basis.

NHS Lothian CAMHS Inpatient Unit Daily rate:	£497.79
Total CAMHS IPU costs 2011/2012:	£209,106
Additional Inpatient costs (Huntercombe):	£44,085
<b><u>Total Inpatient Costs 2011/2012:</u></b>	<b><u>£253,191</u></b>

## NHS Fife CAMHS ITS: Service Outputs and Outcomes

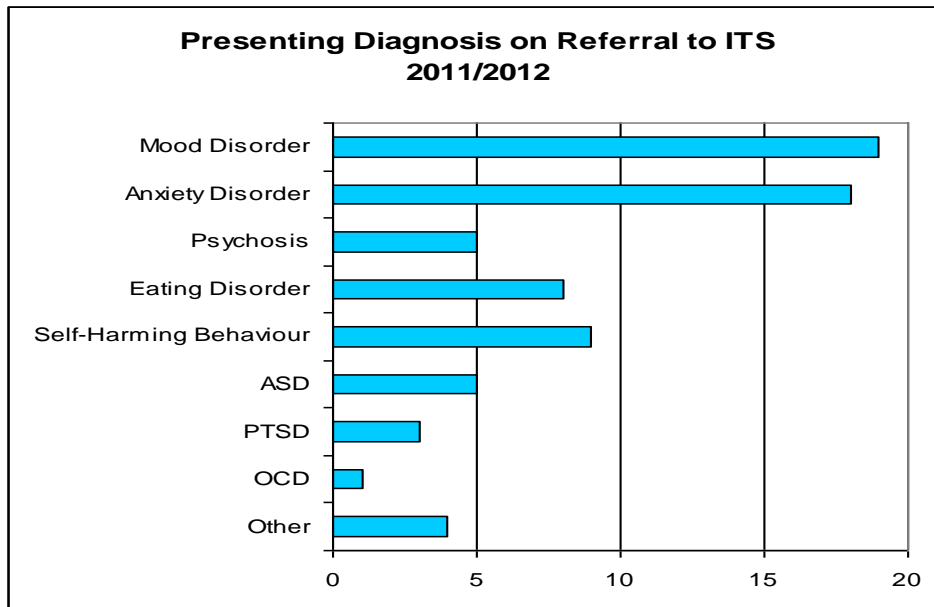
The investment in the Intensive Therapy Service provides key outputs which can be categorised into 3 main areas: Therapeutic, Clinical and Training/Consultation. These have a direct correlation to specific outcomes which have a positive impact on children and young people's mental health and are highlighted within national strategy documents.



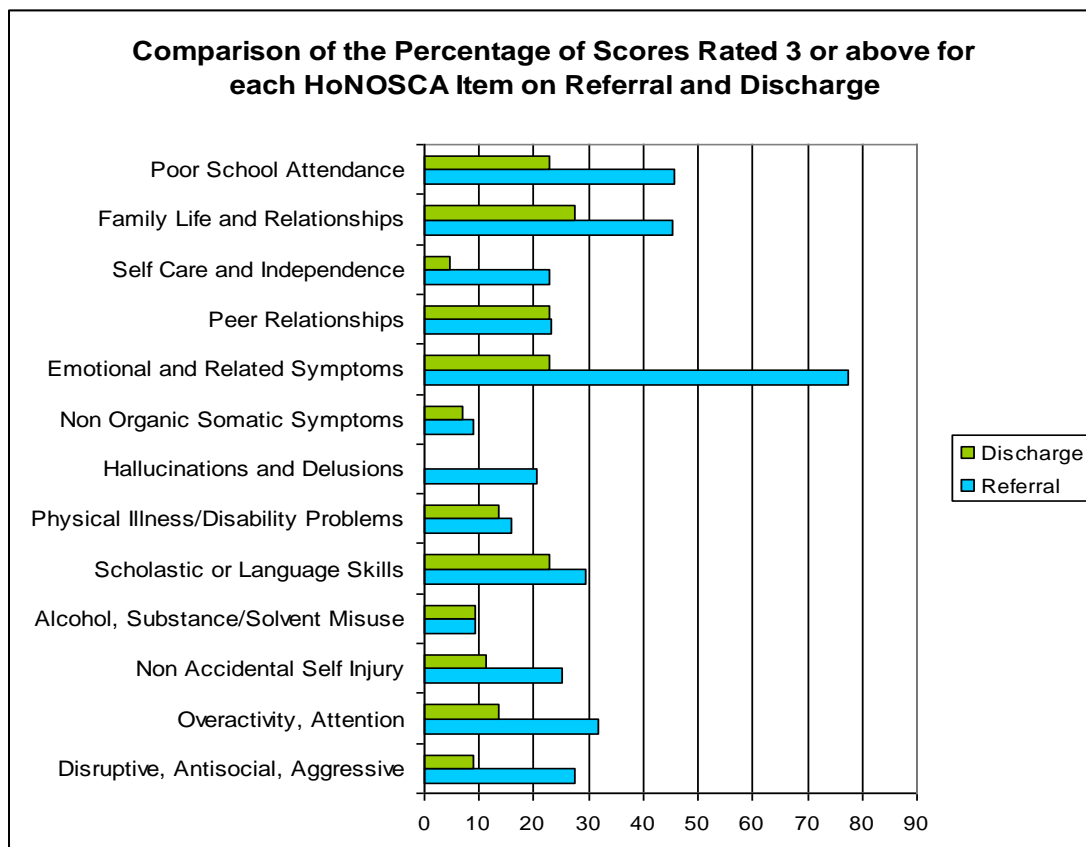
**Impact:**

NHS Fife CAMHS Intensive Therapy Service has been able to demonstrate significantly positive data which can be matched to the high level outcomes:

During the 2011/2012 period The Intensive Therapy service has discharged **44** young people, aged between **11-17 years** who presented with a wide range of severe and complex mental health difficulties that would have previously required admission to an inpatient care provider for a proportion of their care.



Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA) is used to measure mental health outcomes on all referred young people and has shown marked improvement in all mental health domains in **90.9%** of cases.

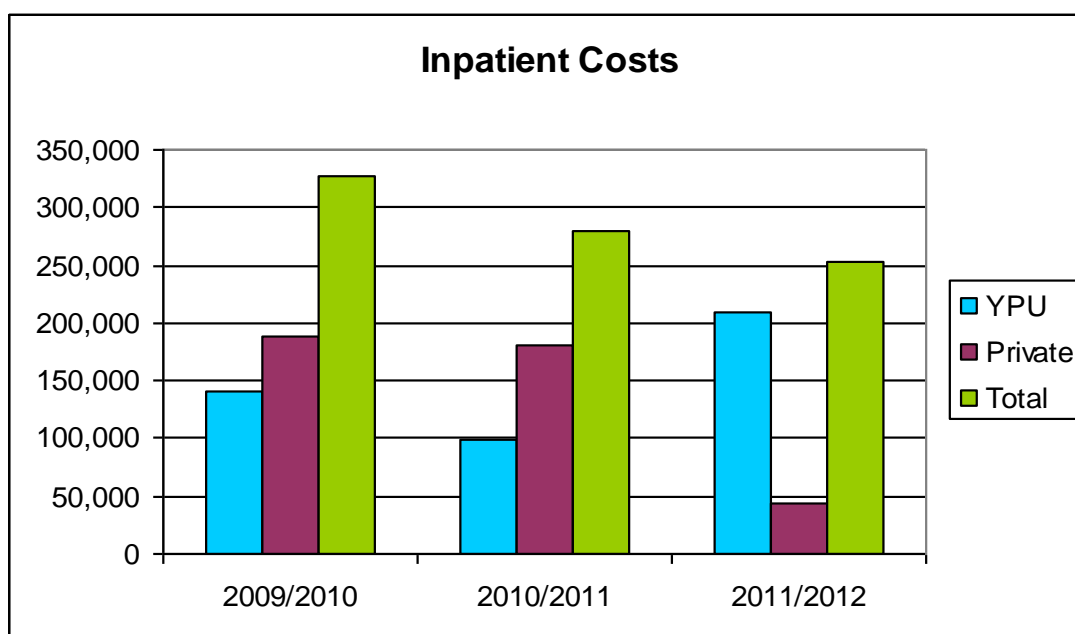


## Age Appropriate Inpatient Admissions:

Admissions to the regional CAMHS Inpatient unit have increased over the past 3 years in line with South East Consortium partners which reflects ease of access to age appropriate facilities and demonstrates a significant reduction in admission to adult inpatient mental health facilities and private health care providers. The service can also demonstrate reduced length of stay statistics which are significantly lower than the national average.

Inpatient costs have shown a significant decrease over the period 2009-2012 indicating a 3 Year efficiency of: **£ 74,556.**

	2009/2010	2010/2011	2011/2012
NHS CAMHS Inpatient units	£140,348	£99,066	£209,106
Private Inpatient providers	£187,399	£180,796	£44,085
<b>Total</b>	<b>£327,747</b>	<b>£279,862</b>	<b>£253,191</b>



## Cost Comparison Analysis:

In order to assess the economic impact of the Intensive Therapy Service a direct comparison of cost effectiveness can be made against the NHS Fife CAMHS Inpatient Unit given that the current service provides for the identical population.

Information is based upon NHS Fife CAMHS Inpatient Unit admission records for years 1999-2001 (Final full operating year) and utilising the costings generated by the 'Report of the National Co-ordinating Centre for Delivery and Organisation (2008): The Costs, Outcomes and Satisfaction for Inpatient Child & Adolescent Psychiatric Services (COSI-CAPS) Study'.

Number of Admissions & Length of Stay: NHS Fife CAMHS Inpatient Unit.

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>3yr Average</b>
<b>No. of Admissions</b>	48	40	39	<b>42</b>
<b>Length of Stay (days)</b>	49	55	64	<b>56</b>

Report of the National Co-ordinating Centre for Delivery and Organisation (2008): The Costs, Outcomes and Satisfaction for Inpatient Child & Adolescent Psychiatric Services (COSI-CAPS) The NCCSDO report incorporates national recommended staffing, running and supplementary costings to generate the inpatient costs. The Study generated figures based upon 2005 costings. 2012 costs are calculated by incorporating a 2.5%\* incremental increase to each year from 2005 onwards.

National UK average costings (NCCSDO)

	<b>2005</b>	<b>2012</b>
<b>Cost per Day</b>	£343	£408
<b>Cost per Admission</b>	£24,482	£28,857

\*2.5% inflationary increase as recommended by the Bank of England.

NHS Fife CAMHS Inpatient Unit costs are generated by accepting the national average admission cost as indicated above and applying these figures to the local admission data.

Cost per day: £408.00 x Length of stay: 56 days	Number of Admissions: 42 x Cost per admission: £22,848.00
<b><u>£22,848.00 (per admission)</u></b>	<b><u>£959,616.00 (per annum)</u></b>

The average annual operational costs for NHS Fife CAMHS Inpatient Unit of £959,616 compared to 2011/2012 operational costs of £542,321 for the Intensive Therapy Service results in an annual cost efficiency of:

**£ 417,295.00**

Cost comparison is based on the historical NHS Fife costings for inpatient provision. Were these comparisons to be made incorporating the costs of purchasing inpatient care from NHS Lothian CAMHS Inpatient Unit (£498.00 per day) the annual cost efficiency is:

**£ 628,975.00**

## **Cost Avoidance Analysis:**

The Intensive Therapy Service identified avoidance of admission to inpatient care as a high level outcome. For the period April 2011-May 2012 the ITS **discharged 44 young people** from treatment. Within this group **95.5% avoided admission** to a hospital inpatient setting. Each of these young people presented with severe and complex mental health difficulties as per the referral criteria for admission to the ITS.

In order to gain an assessment of the cost should the ITS be withdrawn a number of assumptions must be accepted:

- NHS Fife CAMHS Inpatient average length of stay data (B).
- Number of patients with severe and complex mental health difficulties would equal current NHS Fife ITS referral data (A).
- Admission to hospital would be necessary for this client group.
- Current SEAT Consortium 'Length of Stay' statistics are misrepresentative without an operational ITS model.
- Fife CAMHS would not have capacity to provide alternative Tier 4 provision.
- All admissions would be accommodated within age appropriate inpatient facilities (C).

Information generated using 2011/2012 data.

A. Number of patients	B. Average Length of Stay (days)	C. Cost per day (Lothian YPU)	Total cost. (AxBxC)
44	56	£498	<b><u>£1,227,072</u></b>

The Scottish Government has acknowledged the existence of a significant shortfall in age appropriate inpatient facilities for young people with mental health difficulties<sup>5</sup> and it should be assumed that within the current context meeting NHS Fife's care requirements would be unachievable. The outcome of this would be increased admissions to local adult inpatient facilities placing additional strain on existent adult mental health services.

Cost implication for 50% of NHS Fife under 18's admitted to adult wards: £390,544\*

Cost of remaining 50% admitted to Scottish CAMHS Inpatient Facilities: £613,536

**Estimated Total Cost: £1,004,080**

\* Based upon ISD Scotland (2011): NHS Fife Adult mental health inpatient cost per day: £317.00



## Summary:

The NHS Fife CAMHS Intensive Therapy Service has been operational since 2002 and during this period has revised its role and function to meet the needs of the young people within Fife and the wider NHS Fife CAMH service. This service evolution has seen a static inpatient care provision develop into a multi-disciplinary service with the aim of developing inclusive partnerships between service user and service provider where the focus is on identifying and enhancing the strengths of individuals and their support systems to address their mental health needs by utilising the resources within their communities.

This model of care delivery has demonstrated itself to be economically viable however of paramount importance are the positive clinical outcomes that have continued to improve since the services' inception. In line with the ethos that the mental wellbeing of children and young people is everyone's responsibility, NHS Fife CAMHS ITS has been able to engage organisations that have a significant influence on a young person's development such as the education system and the local community in the process of treatment and recovery. This demonstrates a marked improvement over the previous treatment models tendency to manage mental ill health in isolation thus extending the period a young person is out of their own environment and promoting the negative stigma of mental illness. The social value that this model of care provides is therefore invaluable.

It must be stressed that the current intensive home treatment model within NHS Fife is not a stand alone model and its success is a result of the wider Fife Child and Adolescent Mental Health Service functioning at its optimum level and delivering care that is responsive to the needs of this client group and in line with key national health drivers.

As economic challenges remain within wider society the Intensive Therapy model has demonstrated within Fife to be an economically viable intervention which, with consolidation and continued investment should continue to generate positive outcomes for service users, Fife Child and Adolescent Mental Health Services and NHS Fife.

## Key Outcomes:

- **Significant positive clinical outcomes** resulting in global improvements in young people's mental health.
- **Reduced admissions** to adult mental health inpatient facilities.
- **Improved access** to regional age appropriate inpatient care facilities.
- **95.5%** of young people presenting with severe mental health difficulties within Fife **avoid inpatient admission.**
- **Average Length of Stay** in inpatient care that is **significantly below** the national average.
- Three year cost reduction for inpatient care demonstrating an **efficiency of £74,556** since 2009/2010.
- **Positive cost comparison** between previous NHS Fife inpatient provision and current NHS Fife ITS operational costs of **£417,295.00**
- The existence of NHS Fife CAMHS ITS **avoids a cost of £1,227,072** were external inpatient providers to be used to fully meet current clinical need.

## **References:**

<sup>1</sup>Scottish Executive (2003) Scottish Needs Assessment Programme (SNAP): Report on Child & Adolescent Mental Health. Scottish Executive: Edinburgh.

<sup>2</sup>Mental Welfare Commission (2006). Guidance on the Admission of Young People to Adult Mental Health Wards. MWC: Edinburgh.

<sup>3</sup>Scottish Government (2011) NHS Performance Targets. SG: Edinburgh.

<sup>4</sup>Scottish Government (2011). Specialist CAMHS Balanced Scorecard. Scottish Government: Edinburgh.

<sup>5</sup>Scottish Executive (2005) The Mental Health of Children and Young People: A Framework for Promotion, Prevention and Care. Scottish Executive: Edinburgh.

National Co-ordinating Centre for Delivery and Organisation (2008). The Costs, Outcomes and Satisfaction for Inpatient Child & Adolescent Psychiatric Services (COSI-CAPS). NCCDO: London.