Health Economic Analysis
Positive clinical and financial impact through investment in prescribing decision support

FDB First Databank

FDB OptimiseRx®

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1. Purpose of analysis

FDB (First Databank)

FDB, part of the Hearst Health network, is the leading provider of drug knowledge that helps healthcare professionals make precise decisions. FDB enables our information system developer partners to deliver valuable, useful, and differentiated solutions.

OptimiseRx: The flagship product in UK primary care

OptimiseRx delivers patient-specific prescribing information at the point of care and is integrated in prescribing workflows within clinical systems.

4000+
GP practices

40.5m
patient coverage

4800+
best practice messages

15,000+
SNOMED and DM&D codes checked for relevance to patient

£800m

"Preventable adverse drug reactions are responsible for **10% of hospital admissions** in older people at a cost of around **£800m** annually."

(DAVIS & ROBSON, 2016)

Analysis scope

FDB commissioned an independent cost benefit analysis forecasting a net present value (NPV) and cost benefit ratio from 2020/21 to 2025/26. FDB provided data for a snapshot analysis of **three of 4,800** OptimiseRx best practice primary care messages.

The three messages reference best practice national guidance on prescribing antipsychotic drugs. The cohorts for the messages were patients with learning disabilities (LD), generalised anxiety disorder (GAD), or dementia.

! THE IMPACT OF **THREE** OF **4,800** MESSAGES

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2. Clinical background

Antipsychotic use

Antipsychotics are associated with unwanted side effects such as weight gain, movement disorders, heart attack and stroke. As such their use in dementia, GAD and LD is discouraged in formal national guidance and indicators from organisations including the National Institute for Health and Care Excellence (NICE), NHS Business Services Authority (NHSBSA) and national project STOMP. A reduction in use of antipsychotics in learning disabilities is reinforced via the Quality and Outcomes Framework (QOF) and frail patients are a priority for structured medicines reviews under the Network Contract Directed Enhanced Service (DES).

Antipsychotics and primary care

The three OptimiseRx messages were chosen for analysis for key patient cohorts where antipsychotic prescribing can impact the patient, causing adverse drug events.

The OptimiseRx messages may include an opportunity to review, reduce or stop use of antipsychotics, or alternatives to proposed medication for that patient cohort, such as therapy.

OptimiseRx messages in relation to patients whose medical records indicate antipsychotic prescribing is not recommended:

Learning disability
Ref. NICE NG11, *May 2015*

Generalised anxiety disorder
Ref. NICE CG113, *July 2019*

Dementia
Ref. NICE NG97, *June 2018; MHRA, 2014*

Impact and risk areas from prescribing antipsychotics for these conditions:

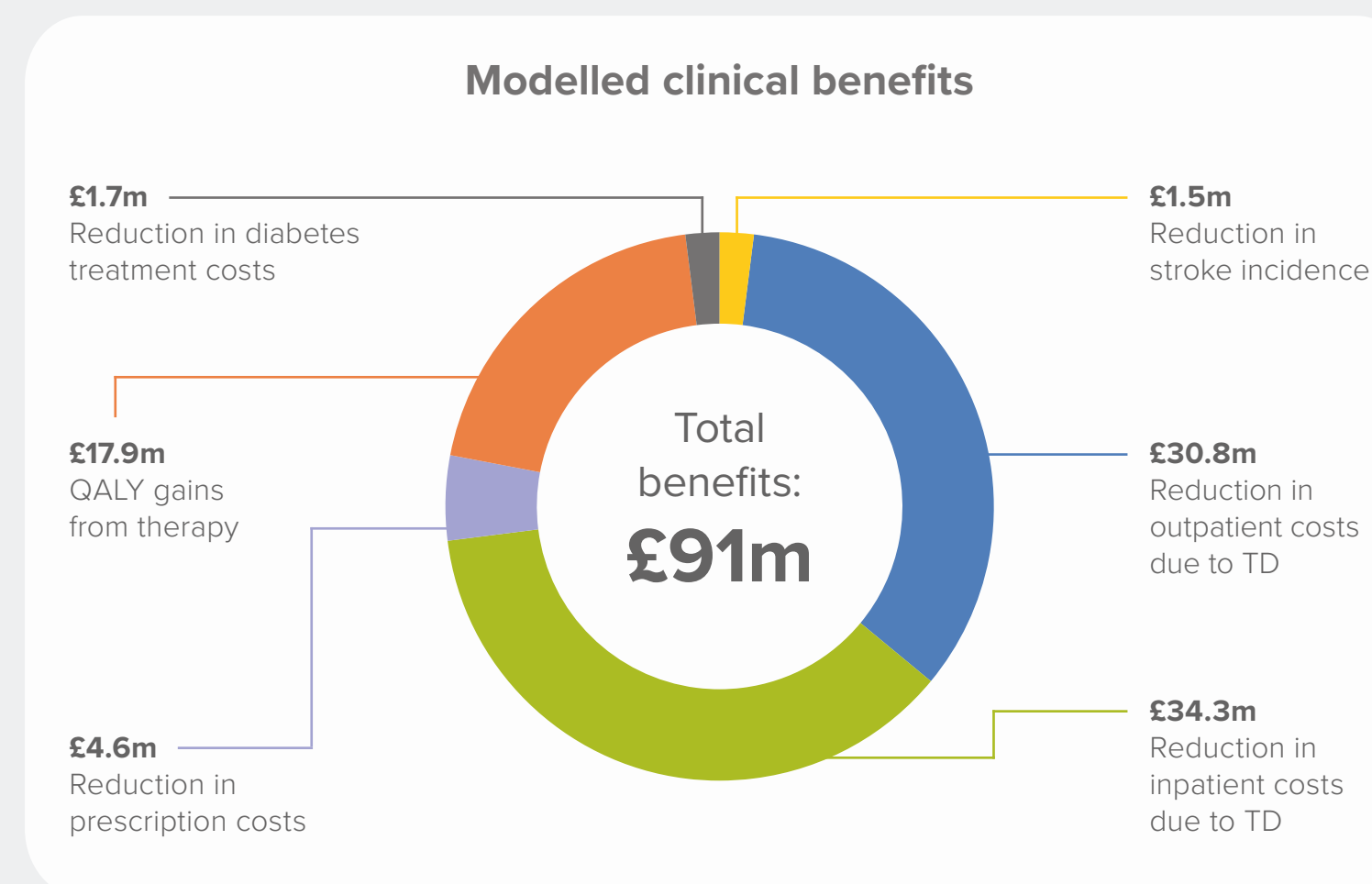Type II diabetes | Stroke | Tardive dyskinesia (TD) | Outpatient care | Inpatient care | Quality of life

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3. Results

Modelled clinical benefits and costs from OptimiseRx*
(2020/21-2025/26)

Modelled clinical benefits

£1.7m Reduction in diabetes treatment costs

£1.5m Reduction in stroke incidence

£17.9m QALY gains from therapy

£30.8m Reduction in outpatient costs due to TD

Total benefits: **£91m**

£4.6m Reduction in prescription costs

£34.3m Reduction in inpatient costs due to TD

Unmodelled potential clinical benefits:
Reduction of akathisia, cardiac arrest, dyspnoea, myocarditis avoidance, sudden death.

Modelled costs:
1. Entire cost of OptimiseRx solution
2. Cost relating to mental health intervention and relevant therapy

Modelled costs **£74.7m**

Forecasted totals:

Every £1 invested is forecast to bring a return of £1.20 from the impact of only three OptimiseRx messages

NPV **£16.3m**

* Based on 2019 in year analysis